

Appendix 4
Hallman Tycom Report

**In re TYCO INTERNATIONAL, LTD.
MULTIDISTRICT LITIGATION**

MDL Docket No. 02-1335-B
SECURITIES CATEGORY

This Document Relates to:
ROSEMARIE STUMPF v. NEIL R.
GARVEY, et al.

Docket No. 03-CV-1352

(In re TYCOM LTD. SECURITIES
LITIGATION)

EXPERT REPORT OF GREG HALLMAN

Expert Report of Greg Hallman in Tycom Securities Litigation

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1 – Expert Report of Greg Hallman

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW HAMPSHIRE**

ROSEMARIE STUMPF V.
NEIL R. GARVEY, ET AL.
(IN RE TYCOM SECURITIES LITIGATION)

Civil Action No. 03-CV-1352

EXPERT REPORT OF GREG HALLMAN

December 21, 2007

Respectfully Submitted,



Greg Hallman

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Prepared at the Request of Counsel*

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I. Introduction

I have been retained by counsel for the plaintiffs in the TyCom Ltd. Securities Litigation to provide an opinion on damages suffered by the purchasers of the common stock of TyCom in the initial public offering on July 26, 2000, and subsequently in the open market through December 17, 2001, the end of the class period. Plaintiffs claim, among other things, that defendants misrepresented the projected demand for bandwidth, and constructed a business plan based on an assumption of the existence of unreasonably high demand for bandwidth which they knew or should have known was false.

II. Qualifications

I am a member of the finance faculty at the McCombs Graduate School of Business at the University of Texas at Austin where I teach MBA courses in corporate finance and valuation, investment theory and practice, and real estate debt and equity securities (MBS, CMBS, CDOs, REITs). I am also a visiting professor of finance at Instituto de Empresa in Madrid, Spain. Just prior to joining the faculty at the University of Texas I was a Managing Director in the Silicon Valley office of Intecap, Inc., an economic consulting firm purchased by Charles River Associates in 2004. I am currently a Senior Consultant with CRA International. I have an MBA in Finance from Tulane University and a Ph.D. in Finance from the University of Texas at Austin. A copy of my current curriculum vitae (CV) is in Tab 2, which includes my professional presentations and publications, along with a listing of my prior testimony.

Summary of Opinion

- 1) The initial TyCom stock price was largely based on the market's expectations of future undersea bandwidth demand, and the significant decline in the stock price was caused by the market's realization that TyCom's demand projections were inflated.
- 2) When information concerning the absence of demand for the capacity that TyCom was constructing reached the market, TyCom's stock price fell in statistically significant amounts, summing in aggregate to at least \$12.61 per share. Plaintiffs claim that TyCom's public

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statements regarding demand for undersea bandwidth services were both without basis and misleading, and my event study analysis measures the effect on the value of the stock related to the market's realization in January, February, and March of 2001 that the level of future undersea bandwidth demand represented by TyCom was overstated.

- 3) Discounted cash flow analysis of the value of TyCom using the valuation models used by Goldman Sachs and Salomon Brothers analysts incorporating reduced demand and sales assumptions show that the market value of TyCom's stock at the time of the offering under these reduced demand and sales assumptions was between \$13.81 and 13.92 per share, which supports the conclusion from the event study that TyCom's stock was artificially inflated by at least \$12.61 per share on the date of the offering.
- 4) The significant decline in TyCom's stock price resulting from the market's realization that TyCom's representations of future undersea bandwidth demand were overstated caused the purchasers of TyCom stock to suffer losses of \$12.61 per share. This estimate provides a sound basis for computing the damages suffered by members of the class in this action, if the IPO would have been possible had there been no overstatement of bandwidth demand by the defendants.

III. Background

TyCom's Business

TyCom's predecessor, Tyco Submarine Systems Ltd. (TSSL), a wholly owned subsidiary of Tyco International, Ltd., designed, manufactured, and installed undersea fiber optic cable systems to link terrestrial cable systems. From 1997 to 1999, TyCom's revenue from that business quadrupled¹, as large providers of bandwidth capacity purchased undersea systems. In the fall of 1999, Tyco and TyCom's

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management decided to construct and operate a global undersea network to sell bandwidth capacity and compete with those customers, and to spin-off a minority interest in TyCom in an initial public offering.²

Path of TyCom's Stock Value

On July 26, 2000 Tyco spun off a minority interest in TyCom, selling approximately 70.3 million shares of TyCom stock (a planned 61.1 million shares plus an over-allotment of 9.2 million shares) at \$32 per share.³ After the sale of this minority position to outside shareholders, Tyco owned 86% of TyCom, and the public shareholders owned 14%.⁴ Over the first 5 weeks of trading TyCom stock went from the \$32 offer price up to \$45.44 per share in early September 2000. After this brief initial run-up, TyCom stock fell to \$19.69 (a drop of 56.7%) in late December 2000, rallied briefly back to \$30.10 per share by late January 2001, and then fell from \$30.10 to \$9.99 (a drop of 66.8%) by early April 2001.⁵ In short, the stock went from the offer price of \$32 per share down to \$9.99 per share over an eight month period, July 27, 2000 – April 5, 2001. Chart 1, below, illustrates the price of TyCom Stock over the entire time it traded on the open market.

¹ TyCom Form S-1/A, filed 7/26/2000 pg. F-4. Revenue from Product Sales went from 342.6 Million in 1997 to 1,450.0 Million in 1999, an increase of 423%.

² Consolidated Securities Class Action Complaint, Paragraph 52.

³ "TyCom Announces Exercise of Over-Allotment Option in IPO" PR Newswire, August 8, 2000.

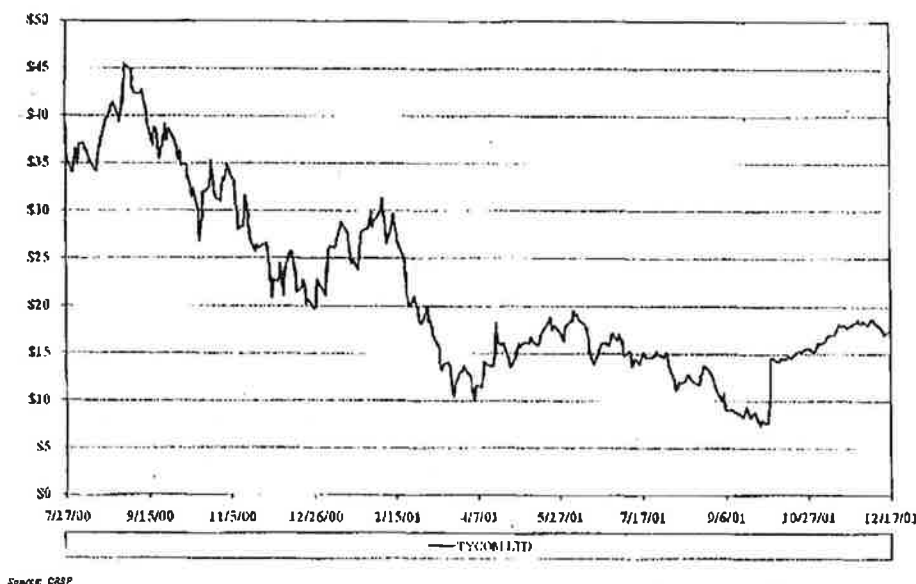
⁴ "UBS Warburg "Initiating Coverage with a Buy Rating and \$63 Price Target" August 21, 2000.

⁵ CRSP Stock Series for TyCom.

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Chart 1

In re TyCom Ltd. Securities Litigation
TyCom Stock Price
 July 27, 2000 - December 17, 2001



Fundamental Connection between the Market's Expectations of Sales of Bandwidth and TyCom Value

Over the time that TyCom stock traded in the market, its value was primarily driven by the market's expectation of TyCom's sales of bandwidth on the TyCom Global Network. According to one analyst report, the September 6th, 2000 trading price of \$42.88 for TyCom stock could be deconstructed into \$14.30 of value for the existing TSSL business of designing, manufacturing and installing undersea systems, \$2.18 for cash on hand, and the remaining \$26.40 of value tied directly to anticipated capacity sales on the TyCom Global Network (TGN).⁶

⁶ CSFB Equity Research "TyCom, Ltd." September 15th 2000 pg 7.

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The TGN component of the value of TyCom stock was driven by expected sales, because at the time of the initial sale of the stock in July 2000 and throughout the class period ending in December 2001, the TyCom Global Network was an incomplete work in progress. At the time of the offering in July 2000, no portion of the network was complete, the Trans-Atlantic leg of the network was scheduled to be complete in the second half of 2001, and the rest of the network, comprising of 250,000 kilometers of undersea cable linking all six inhabited continents, was scheduled to be completed and put into service over the next ten years.⁷

Sales Expectations Depended on Expectations of Demand

The expectations for sales on the TGN were directly connected to overall expectations of growth in demand for undersea bandwidth capacity, which was driven by growth in electronic commerce and overall worldwide use of the internet. This anticipated increasing bandwidth demand was therefore a key input to a valuation of TyCom.

TyCom itself often referenced the importance of future bandwidth demand to its business plan. For example, in the opening pages of its prospectus, TyCom listed addressing increasing bandwidth demand as the first of the "principle elements" of its business strategy:

"The principal elements of our business strategy are to:

Deploy the TyCom Global Network to Address Increasing Demand. We are launching the TyCom Global Network to address the increasing demand for undersea fiber optic bandwidth driven by the growth of the Internet and bandwidth-intensive applications."⁸

A common tagline to TyCom press releases during the class period was the claim "To meet growing demand, the Company is also deploying and selling capacity on the TyCom Global Network."⁹

⁷ July 26, 2007 TyCom, LTD. Registration Statement, Pg 23 & 35.

⁸ July 26, 2007 TyCom, LTD. Registration Statement, Pg 35.

⁹ See for example, "TyCom Receives Landing Licenses for Transatlantic System" 8/22/2000, PR Newswire, "TyCom receives US\$82-million capacity order on transatlantic system" 1/17/2001 PR Newswire, "'TyCom Announces Large Scale Expansion of Global Fleet'" 11/17/2000 PR Newswire.

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This statement, made in numerous press releases by TyCom over the class period, demonstrates the importance of bandwidth demand to the TyCom business plan.

TyCom Inflated Representations of Demand

Plaintiffs allege that defendants misrepresented the demand for bandwidth through the prospectus and other public statements at the time of the offering and afterwards.

TyCom highlighted and quantified the increasing demand for bandwidth in the prospectus for its public offering:

"[r]ecent research conducted for us by the Yankee Group projects that transatlantic fiber optic traffic volume will increase at a compound annual growth rate of approximately 123% from 2000 through 2005. ... According to The Yankee Group, transpacific traffic volume will increase at a compound annual growth rate of approximately 129% from 2000 through 2005. ... This projected demand for increased undersea bandwidth capacity will provide a significant opportunity to system and bandwidth capacity providers, especially those that have the technology, capital and infrastructure required for fast deployment and reliable maintenance of undersea fiber optic cable systems."¹⁰

TyCom continued to make statements regarding undersea bandwidth demand after the offering. In a press release about a TSSL system sale in early August 2000, Neil Garvey, the president and CEO of TyCom stated "The robust demand for high-capacity undersea bandwidth in the Asia-Pacific region ... continues unabated..."¹¹ In a press release about a TSSL system sale in late August 2000, Neil Garvey, the president and CEO of TyCom stated "These orders confirm that actual demand for undersea capacity is outpacing the demand forecasted by the industry," and that "the recent acceleration in system upgrades and orders for new systems indicates that the demand for high capacity undersea networks remains strong.

¹⁰ July 26, 2007 TyCom, LTD. Registration Statement, pg 36.

¹¹ "TyCom Signs \$171-Million Contract for Australia-Japan System" PR Newswire 8/10/2000

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As both a bandwidth provider and network supplier, TyCom is well-positioned to leverage both opportunities in the market."¹²

These statements continued into 2001. For example, in February 2001, TyCom issued a press release discussing staffing increases at its European Capacity Sales Headquarters, stating "Additional staff is being hired to meet continuing strong demand."¹³ On March 13, 2001, Neil Garvey, president of TyCom claimed "The strong demand outlook for undersea bandwidth continues to exceed our expectations and forecasts. TyCom is the undisputed leader in providing undersea fiber optic networks to help meet this demand."¹⁴

TyCom's Inflated Representations of Demand Impacted TyCom's Market Value

Because TyCom was a leading provider of undersea systems, the market credited its statements concerning projected future demand. JP Morgan, for example noted in its August 21st, 2000 initiating coverage report:

"Management's long history in subsea systems development has earned it a strong reputation for execution and an intimate knowledge of global supply and demand."¹⁵

This reputation for "intimate knowledge" led JP Morgan to give special weight to TyCom's forecasts for demand:

"As one of the primary systems developers, TyCom is in an excellent position to gauge the subsea cable industry. [emphasis in original] TyCom sees that opportunity remains in the Atlantic Market and will build its inaugural cable system there."¹⁶

¹² "TyCom Announces \$100 Million Order From Asia Global Crossing" PR Newswire 8/24/2000.

¹³ "TyCom to Upgrade Transatlantic Capacity to Meet Additional Demand; TyCom Global Network Deployment Remains on Schedule with Transatlantic System Slated for July Service; Company Opens European Capacity Sales Headquarters in London" PR Newswire, 2/26/2001.

¹⁴ "Tyco International to Acquire The CIT Group" 3/13/2001.

¹⁵ JP Morgan 8/21/2000 pg 1. A1YC-20858814

¹⁶ JP Morgan 8/21/2000 pg 31. TY-MF011989

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Plaintiffs allege that if TyCom had publicly released realistic and reliable estimates of demand and future sales on the TGN, the market would have incorporated those estimates into their valuation of TyCom stock, and a valuation based on realistic and reliable estimates of demand would have produced a lower offer price in the IPO, and the offering either would not have been feasible at all or would have produced a lower valuation for the stock sold to the public.

Components of Demand

Because of the importance of future bandwidth demand to TyCom's value, TyCom's fortunes were directly tied to the drivers of bandwidth demand such as expected internet traffic and internet usage, and the spread of internet traffic and usage throughout the world.

As Salomon Smith Barney outlined in its Equity Commitment Committee Memorandum:

"The company's planned growth is predicated upon the expectation that the demand for international undersea bandwidth capacity will grow faster than the supply of undersea bandwidth capacity... The projected demand is highly correlated to relatively recent phenomena such as the growth in the use of the internet, the expansion of satellite and wireless communications and other bandwidth intensive applications. Therefore the future demand is inherently difficult to predict."¹⁷

The link between internet traffic and TyCom's prospective sales of capacity was emphasized in the pre-IPO roadshow presentations. A slide entitled "New Applications Drive Demand" outlined increasing bandwidth usage by new communication applications. The following slide concluded that these new communication applications were "Leading to Strong Demand for Undersea Bandwidth Capacity."¹⁸ The Institutional Sales Memo in the same road show packet summarized the "Investment

¹⁷ CITI-TYCOM003419

¹⁸ CITI-TYCOM004907-08

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Thesis" for TyCom. The first line in this thesis was "Demand Will Continue to Outstrip Supply. TyCom is well positioned to benefit from the explosive growth in demand for communications services."¹⁹

TyCom's website also drew connections between "exponential" increases in demand, the growth of the internet and bandwidth-intensive applications, and TyCom's business plan.

"The demand for global connectivity is increasing exponentially, driven by the growth of the Internet and the expansion of wireless and other bandwidth-intensive applications. Our mission is to provide bandwidth to meet that demand with the world's longest, most extensive and most technologically advanced undersea fiber optic telecommunications network: The TyCom Global Network."²⁰

Eventual Discovery of True Demand

As the market discovered – through news about the demand drivers for capacity and the performance of the fiber-optic industry as a whole, as well as TyCom's increasingly obvious inability to make any substantial sales on the TGN – that the representations by TyCom concerning demand were not accurate, the stock price of TyCom started to decline.²¹

Although TyCom reported publicly that demand was strong,²² TyCom's inability to make any substantial sales on the TGN revealed itself on a daily basis throughout the class period. Around the time of the IPO, many analysts had predicted around 1.4 billion dollars in fiber pair "pre-sales" over the first two years of the TGN,²³ in addition to significant capacity sales over those years.²⁴ In early October 2000,

¹⁹ SSB Institutional Sales Memo pg 6 CITI-TYCOM004842

²⁰ The Internet Archive archive of "www.submarinesystems.com/about.html" date stamped 10/17/2000.

Internet Source: <http://web.archive.org/web/20001017220012/http://www.submarinesystems.com/about.html>.

²¹ By late March, 2001, an analyst report by Goldman Sachs recognized that the market had devalued TyCom's ability to make the previously expected capacity sales and was pricing the stock based on TyCom's traditional systems sales business, stating "The stock now ignores the value of the carrier business." Government Exhibit 41, "TCM- Shifting Rev Mix to Reflect Lower Atlantic Pricing – Demand Stronger. R1." Goldman Sachs 3/23/01.

²² See, for example the statements cited in footnotes 8-11 above.

²³ See, for example Bear Sterns "A daring new communications company" 8/18/2000 pg 8 and JP Morgan 8/21/00 "Going Long" p44

²⁴ Fiber pair sales transfer the ownership of the cable to the customer. Most circuit capacity was sold as an "Indefeasible Right of Use" (IRU) which was a long-term lease to carry capacity on the cable.

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Lehman Brothers advised investors that "Key announcements, which could be positive catalysts, could be around big bucket presales (i.e. wavelengths, fiber pairs), additional supply contracts, or joint ventures."²⁵

On February 1st, 2001, UBS Warburg stated "We anticipate additional announcements of capacity sales throughout the remainder of fiscal 2001..."²⁶ Plaintiffs claim these announcements were not forthcoming at the magnitude expected by the marketplace.

Industry news from January through March of 2001 revealed that TyCom's representations of projected demand were inflated. Major market-moving news about the performance and near-term future prospects of the telecommunications, fiber-optic, and internet-traffic sectors, which were the drivers of demand for undersea bandwidth, came out in January, February and March of 2001. As detailed below, during January, February, and March of 2001, the following news came out related to the current and future prospects of the telecommunications, fiber-optic, and internet-traffic sector:

- o TyCom announced that as of the end of its fiscal first quarter 2001 (quarter ending December 31, 2000), it had made only one capacity sale on the TGN;
- o Lucent Technologies planned to sell its fiber-optics unit;
- o Several companies in the telecom sector lowered revenue estimates;
- o TheStreet.com ran an article suggesting the end of the run for telecom providers;
- o Analysts released reports on TyCom with negative changes to the company outlook.

The news about the telecommunications, fiber-optic, and internet-traffic sector that came out in late January through March of 2001 had an immediate and significant impact on the value of TyCom stock. Over the 46 trading days between January 16, 2001 and March 22, 2001, TyCom stock went from \$27.75 to \$10.48, a per share loss in value of \$17.27 (62%), and an overall loss in public shareholder equity value of \$1.2 billion.²⁷

²⁵ Lehman Brothers "The Play on Undersea" 10/3/00 pg 17

²⁶ UBS Warburg "Fiscal 2001: A Year of Important Milestones" pg 6

²⁷ 70.3 million shares x \$15.53 per share = \$1.214 billion.

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IV. Methodology and Bases for Opinion on Damages

- 1) I have calculated damages suffered by the common shareholders of TyCom using a traditional event study analysis. I have also performed a discounted cash flow (DCF) analysis as a check on and support for the event study analysis. The value of TyCom stock was in large part driven by the anticipation of capacity sales by TyCom on their TyCom Global Network, and both the event study analysis and the DCF analysis measure the effect on the value of TyCom stock from changes in the market's expectations of TyCom's capacity sales.

The Event Study Analysis:

- 2) I conducted an event study to determine the losses suffered by investors as the market learned of the true state of the bandwidth market. An event study measures how much stock price change on event dates cannot be explained by market, and where appropriate, industry, factors, and tests whether or not the residual stock price movements (the stock returns with the market and industry effects removed) could reasonably be explained as random fluctuations. If the residual stock returns on event dates are statistically significant, it means that the stock price movements cannot be attributed entirely to market factors, industry factors, or random volatility, but rather some portion of TyCom's stock return on that date was associated with news about TyCom, broadband demand, or the general state of the telecommunications, fiber, and internet-traffic sector. Since the event dates are dates on which information reached the market indicating there was a low level of demand for broadband services, statistically significant decreases in TyCom's stock price on these days indicate that the market's expectations for demand for broadband services were changed by the news, and these reduced expectations for demand for broadband services caused investor losses in TyCom stock on these days.

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- 3) I, and staff working at my direction, gathered stock price data for both TyCom and the S&P 500 index over the entire publicly traded period for TyCom stock, July 27, 2000 – December 17, 2001. Using this data, I estimated a statistical market model relating TyCom stock returns to returns on the S&P 500 and returns on a set of comparable companies for TyCom stock over the period August 1, 2000 (excluding the first three trading days after the IPO) through January 12, 2000 (the last trading day before the announcement of TyCom's fiscal Q1 2001 and the first capacity sale on the trans-Atlantic leg of the TGN.) This pre-period estimation period consists of 115 trading days and produces a statistical model of TyCom's stock returns with acceptable levels of statistical significance for both the model as a whole (F-test) and the individual parameter estimates (p and t values). Tab 4 contains the data used to estimate the market model, and Tab 5 contains the statistical output and model parameters calculated in the pre-period estimation period.
- 4) The model I estimated is a "two-factor" model, with the S&P 500 index as a factor controlling for returns in the overall market, and an industry factor controlling for returns in the industry. The industry factor in this model is an equal weighted index of a group of companies identified as "services comparables" by Banc of America.²⁸ These companies are Williams Communications, Qwest Communications, Global Crossing, Level 3 Communications, 360 networks, and Metromedia Fiber Network.²⁹ These companies were active in the communication services business, which was the market into which TyCom was transitioning its business with the construction of the TGN.
- 5) I have also estimated a one-factor model, where the single factor is the S&P 500 index representing the market as a whole, and there is no industry factor. Although a "two factor" model with both a market factor and an industry factor is common in event studies used in

²⁸ Banc of America Securities "TyCom Ltd." 8/21/00 pg 7.

²⁹ Broadwing was also listed in the report, but I was unable to locate a complete price series for the time period necessary for this analysis, so it was excluded from the index.

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litigation, a one factor model is more widely used in the academic literature and may be more appropriate in this case. Here, the material misrepresentations alleged by Plaintiffs were misrepresentations about the prospects for the broadband service industry as a whole. As such, the eventual disclosure of the true prospects for the undersea broadband service industry impacted the industry as a whole, not just TyCom. A two factor model which controls for the returns in the market and the returns in the industry will typically under-estimate the impact of industry related news on the stock price of TyCom. A two-factor model will only capture TyCom stock's reaction to news beyond that in TyCom's historical relationship with its industry peers, i.e. a two-factor model measures how industry news impacted TyCom incrementally more than its peers.

- 6) I used the estimated market models to test TyCom's daily stock returns for statistical significance during the stock's decline after the initial pre-period estimation period. With an "expected" return on TyCom stock from the estimated market model, the total return on TyCom stock on any trading day can be deconstructed into an expected return predicted by the model and an unexplained return. The unexplained daily returns, called the "residual returns" in the language of event studies, are tested for statistical significance using the distribution of residual returns from the pre-period. This test for statistical significance produces a p-value, which can be interpreted as the probability that the observed daily residual occurred solely by chance.
- 7) In addition to the statistical analysis on TyCom stock returns, I also conducted a thorough review of news items related to the telecommunications, fiber, and internet-traffic sectors from January 12, 2001 through December 17, 2001. When negative statistically significant returns on TyCom stock occurred on days when news about the prospects for the telecommunications, fiber, and internet-traffic sectors was released, I calculated the dollar impact of this news per share by multiplying the statistically significant residual return by the value of TyCom stock just prior to the day of the statistically significant return.

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- 8) Five news events were found to cause statistically significant negative returns on TyCom stock during the decline of the stock price from January through April 2001. These five events all have a p-value of .05 or lower, indicating that there is a less than 1 in 20 chance of observing the magnitude of the residual return by chance alone. The statistically significant event dates are as follows:

- a) January 17 and 18, 2001 was a two-day event with a statistically significant 2-day unexplained drop in TyCom's stock price of \$3.95 (p-value of 0.01) in the two factor model. The one-factor model estimates an unexplained drop of \$4.17 (p-value of 0.01). After the market close on January 16, TyCom announced its first capacity sale on the trans-Atlantic leg of the TGN, an \$82 million sale to DishnetDSL.³⁰ On the morning of January 17, 2001, TyCom announced earnings for the first fiscal quarter ended December 31, 2000.³¹ In the announcement, TyCom stated that the capacity sales backlog for the reported quarter consisted solely of a 1/2 fiber sale to C2C on TyCom Transpacific and gave guidance on capacity sales for 2001 of \$775-\$800M.³² After the market close on January 17, 2001, AMD announced lower than expected earnings on soft PC sales and Nielsen/NetRatings announced that internet usage had fallen 15% from October to December of 2000. The morning of January 18, 2001, Goldman Sachs issued a note on TyCom reporting "The company acknowledged what investors have realized, that in 2001, with so many new networks being lit in the Atlantic, supply will actually outstrip demand temporarily."³³
- b) February 21 and 22, 2001 was a two-day event with a statistically significant 2-day unexplained price drop in TyCom's stock value of \$3.61 (p-value of 0.01) in the two-

³⁰ "TyCom Receives \$82-Million Capacity Order on Transatlantic System" PR Newswire 1/16/2001.

³¹ "TyCom Reports 16% Increase in Net Income for First Quarter; Construction of TyCom Global Network on Schedule" PR Newswire 1/17/2001

³² "TyCom Ltd. Transition on Track: First Presales on TGN" Bear Stearns 1/17/01

³³ Governali Exhibit 39.

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factor model. The one-factor model estimates a \$3.40 drop (p-value of 0.02). After the market closed on the 20th, Finisar, a provider of fiber optic subsystems, lowered sales and profit forecasts for 2001 and 2002.³⁴ In addition to the Finisar announcement, on the morning of February 21, 2001, the Wall Street Journal reported that Lucent might sell its fiber-optic manufacturing business, and cited some analysts as estimating the division's value might be half of a previous publicly discussed value because of the "painful slowdown" in the telecommunications industry.³⁵ After the market closed on the 21st, ADC Telecommunications, a supplier of fiber optics for broadband networks, reported lower earnings on reduced telephone and cable company spending.³⁶

- c) March 7, 2001 was a one-day event with a statistically significant 1-day unexplained price drop of \$1.74 (p-value of 0.02) in the two-factor model. The one-factor model estimates an unexplained price drop of \$2.01 (p-value of 0.02). After the close of the stock market the previous day, Broadcom lowered revenue estimates for the first quarter because of "widespread" softening in demand for its products.³⁷ That same evening, JDS Uniphase lowered earnings estimates, citing reduced spending by telecommunications companies.³⁸
- d) Early in the morning on March 14, 2001 Lucent confirmed rumors that it was considering a sale of its Optical Fiber Solutions unit.³⁹ Also on March 14, Nextel Communications, a wireless carrier, warned the market that subscriber growth and cash flow would be lower than the previous quarter due to economic slowdown and reduced business spending.⁴⁰

This is a one-day event with a statistically significant 1-day unexplained price drop of

³⁴ "Finisar Corporation Announces Financial Results for Third Quarter Ended January 31, 2001 And Agreement to Acquire Marlow Industries, Inc." Business Wire 2/20/2001

³⁵ Berman, Dennis "Lucent Plans to Put Optical-Fiber Unity. One of Its Bright Spots, on Auction Block." Wall Street Journal 2/21/2001

³⁶ "ADC Reports First Quarter 2001 Results" Business Wire 2/21/2001.

³⁷ Goss, Ashely "Broadcom Lowers 1st-Quarter Forecast, Blames Slowing Economy" Bloomberg 3/6/2001.

³⁸ Moritz, Scott "JDS Uniphase Blares Another Warning as Fog Persists." TheStreet.com 3/6/2001

³⁹ "Lucent Technologies Pursuing Strategic Alternatives For its Optical Fiber Solutions Business" PR Newswire 3/14/2001.

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\$1.30 (p-value of 0.03) in the two-factor model and a statistically significant 1-day unexplained price drop of \$1.29 (p-value of 0.05) in the one-factor model.

- e) March 21 and 22, 2001 was a two-day event with separate disclosures on each date. TyCom stock experienced a statistically significant 2-day unexplained price drop of \$2.01 (p-value of 0.003) in the two-factor model and a statistically significant 2-day unexplained price drop of \$2.64 (p-value of 0.001) in the one-factor model. Early in the morning on March 21st, 3Com reported reduced demand for products, including broadband modems.⁴¹ On March 22nd, Agere systems, a chip and optical component maker, lowered the price range of its IPO share offering.⁴² Additionally, on both March 21st and March 22nd, negative commentary about the telecommunications industry was published by the Street.com. An article titled "U.S. Wireless Carriers Slow Equipment Spending" was published on the 21st, and another article titled "Handicapping the Endgame" on telecommunications provider troubles was published on the 22nd.⁴³
- 9) On March 23rd, 2001, Goldman Sachs released a comment reducing estimates of fiscal year 2001 TyCom capacity sales from \$775M to \$628M.⁴⁴ On March 30th, CSFB issued a report reducing estimates of cash revenue to TyCom from fiscal year 2001 undersea capacity sales by 60%.⁴⁵ This was followed on April 3rd by Deutsche Bank cutting estimates of TyCom's FY01 circuit sales from \$846M to \$446M, FY02 circuit sales from \$2,251M to \$1,526M, and cutting the price target for TyCom stock in half.⁴⁶ On April 4th, Goldman Sachs published a negative research

⁴⁰ Nextel 8-K SEC Filing, dated 3/14/2001

⁴¹ "3Com Reports Fiscal Third Quarter Results in Line With Reduced Expectations" Business Wire 3/21/2001.

⁴² 3/22/2001 Agere Systems Form S-1 SEC Filing; 3/15/2001 Agere Systems Form S-1 SEC Filing.

⁴³ Koo, Carolyn "U.S. Wireless Carriers Slow Equipment Spending" TheStreet.com 3/21/2001; Willard, Cody, "Handicapping the Endgame" TheStreet.com 3/22/01.

⁴⁴ Governali Exhibit 41. "TCM- Shifting Rev Mix to Reflect Lower Atlantic Pricing - Demand Stronger. RL." Goldman Sachs 3/23/01.

⁴⁵ "TyCom, Ltd." CSFB 3/30/01

⁴⁶ "TyCom, Ltd: Changing Revenue Mix, Estimates and Price Target on Lower-Than-Expected Capacity Sales" Deutsche Bank 4/3/01

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report on TyCom, estimating carrier sales would be \$511M vs. the already revised \$628M.⁴⁷

None of these three major bank analyst reports had a statistically significant impact on the price of TyCom stock under the two-factor model, indicating that the negative information related to TyCom's stock value contained in these reports had already been incorporated into the stock price by the market by the time these analyst reports were released.⁴⁸ The one factor model finds on April 3rd and April 4th a statistically significant 2 day unexplained price drop in TyCom stock price of \$1.65 (p-value of 0.02).

- 10) Table 1 below summarizes the calculation of the dollar value of damages from the event study, and shows the statistically significant daily returns, the statistically significant residual returns, the p-values (indicators of statistical significance), and the dollar value of the statistically significant residuals for each of the events. The sum of the dollar values of the statistically significant residual returns under the two factor model is \$12.61. This \$12.61 represents the decline in the value of TyCom stock associated with the negative news related to the fortunes of the telecommunications, fiber, and internet-traffic sectors which had a statistically significant negative impact on TyCom's stock value. The sum of the residual value under the same significant days using the one factor model is \$13.51

⁴⁷ "TCM- Further Adjustments to Model; FY2001 EPS Remains Unchanged" Goldman Sachs 4/4/2001

⁴⁸ The March 23, 2001 Goldman Comment stated "The stock now ignores the value of the carrier business" and recognized that the market had already discounted the shift in revenue away from capacity sales to the lower margin construction business.

Expert Report of Greg Hallman

Table 1

Date	Two Factor Model						One Factor Model			
	TCM Close	TCM Return	Residual Return	Two Day P-value	One Day P-value	Change in Inflation	Residual Return	Two Day P-value	One Day P-value	Change in Inflation
1/17/2001	\$ 26.00	-6.3%	-5.4%	0.08	0.16	\$ (1.50)	-6.9%	0.05	0.11	\$ (1.90)
1/18/2001	\$ 24.50	-5.8%	-9.4%	0.01	0.01	\$ (2.46)	-8.7%	0.01	0.04	\$ (2.27)
2/21/2001	\$ 22.40	-10.7%	-7.5%	0.07	0.05	\$ (1.89)	-7.0%	0.11	0.10	\$ (1.77)
2/22/2001	\$ 20.70	-7.6%	-7.7%	0.01	0.05	\$ (1.72)	-7.3%	0.02	0.09	\$ (1.64)
3/1/2001	\$ 18.25	-8.6%	-8.7%	0.34	0.02	\$ (1.74)	-10.0%	0.17	0.02	\$ (2.01)
3/14/2001	\$ 13.50	-11.5%	-8.3%	0.01	0.03	\$ (1.30)	-8.3%	0.02	0.05	\$ (1.29)
3/21/2001	\$ 11.84	-13.5%	-6.3%	0.48	0.10	\$ (0.86)	-10.0%	0.23	0.02	\$ (1.36)
3/22/2001	\$ 10.48	-11.5%	-9.7%	0.003	0.01	\$ (1.15)	-10.8%	0.001	0.01	\$ (1.27)
						\$ (12.61)				\$ (13.51)

The DCF Analysis:

- 11) Analyst reports on TyCom around the time of the IPO calculated the value of TyCom and TyCom stock using a DCF (or Discounted Cash Flow) model. A DCF model uses a set of assumptions about a company to project a company's operations and financial results and then discounts the projected cash flows to determine the present value of the company. I have obtained electronic copies of the models used by Goldman Sachs⁴⁹ (the "Goldman model") and Salomon Smith Barney⁵⁰ (the "Salomon model") around the time of the IPO.
- 12) Plaintiffs have provided me with an alternate set of assumptions regarding TyCom which I understand came from their telecom expert in this matter, Mr. Bice, which he opines are reasonable and not overstated. These assumptions are specifically that:

- a) The undersea bandwidth market demand numbers for 2001-2005 should reflect the "true demand" market demand numbers used by TyCom in the model produced in this matter as LYNT5000013762.xls;

⁴⁹ See GSTYCOM20837, produced in electronic format as GS-TSSL-7-21-00.xls

⁵⁰ See Ferris Exhibit 29, produced in electronic format as Ferris 29 - TCM.xls

Expert Report of Greg Hallman

- b) "Current TSSL" business revenues should reflect the "Current TSSL" revenue used by TyCom in the model produced in this matter as LYNT5000012022.xls;
 - c) The revenue from "Fiber Pair" sales should be removed from projections of revenue.
- 13) I have incorporated these assumptions into the Goldman and Salomon models. The models then provide a valuation of TyCom under these alternate assumptions.
- 14) Under the original assumptions for market demand and TyCom sales, the Goldman and Salomon models produced a valuation of \$53.63 and \$70.94, respectively. The actual IPO price reflected a discount to these valuations. For example, the \$32 IPO price represents a 55% discount to the Salomon target price,⁵¹ and the \$32 IPO price represents a 40% discount to the Goldman price.⁵² Applying the observed discount for each model to the target prices generated by each model generates an IPO price from each model.
- 15) Applying the actual IPO discount to the value generated by the Goldman model under the alternate assumptions generates an IPO price of \$13.79. If the IPO would have been feasible at this price, this suggests inflation at the IPO of $(\$32.00 - \$13.79)$, or \$18.21 per share.
- 16) Applying the actual IPO discount to the value generated by the Salomon model generates an IPO price of \$16.57. If the IPO would have been feasible at this price, this suggests inflation at the IPO of $(\$32.00 - \$16.57)$, or \$15.43 per share.
- 17) This DCF analysis using Goldman's and Salomon's models supports the conclusion from the event study that TyCom's stock was inflated by at least \$12.61 per share on the date of the offering.

⁵¹ The observed discount is in line with those used by the market at the time. The first day return can be used to estimate the IPO discount used by underwriters. The one day average return over 1999-2000 for technology and internet stocks was 80.6%. This is equivalent to an IPO discount of 44.6%. See Ritter, Jay and Loughran, Tim. "Why has IPO Underpricing Changed Over Time?" Financial Management, 2004, vol. 33, issue 3.

⁵² The value generated by the Goldman model explicitly incorporates a 20% public to private discount and a 15% IPO discount, and this observed discount is on top of these incorporated factors. The Salomon model incorporates neither a public to private nor an IPO discount in the model that we have. This drives some of the differences between the output of the models. Goldman

Expert Report of Greg Hallman**Damages:**

18) Based on the assumptions outlined above, the July 26, 2000 offering of TyCom stock was inflated by at least \$12.61. This inflation was reduced by the eventual discovery by the market of the true state of the market and prospects for TyCom. Table 2 below states the level of inflation remaining in the market price of TyCom stock on each day of the class period.

Table 2

<u>Start Date</u>	<u>End Date</u>	<u>Inflation Remaining</u>
7/21/2000	1/16/2001	\$12.61
1/17/2001	1/17/2001	\$11.11
1/18/2001	1/18/2001	\$8.66
1/19/2001	2/21/2001	\$6.77
2/22/2001	2/22/2001	\$5.05
2/23/2001	3/7/2001	\$3.31
3/8/2001	3/14/2001	\$2.01
3/15/2001	3/21/2001	\$1.15
3/22/2001	12/17/2001	\$0.00

19) My estimate of the inflation in the price of TyCom stock provides a sound basis for computing the damages suffered by members of the class in this action. Assuming the IPO of TyCom was feasible but for the alleged misrepresentations by the defendants, damages per share equal the difference between the inflation on the date of purchase and inflation on the date of sale. If the IPO of TyCom would not have been feasible had the true state of the market and prospects for TyCom been known, then rescission damages would be appropriate, i.e. damages per share equivalent to any out of pocket loss on the transaction.

expected a market discount greater than the 15% incorporated into its model. Gervani Exhibit 9 states that "GS research believes the stock will trade to 45-50% of the DCF value, represented by TyCom's full 12 system business plan."

Expert Report of Greg Hallman

V. Documents, Data and Other Information Considered

A complete list of all the documents I considered is contained in Tab 3.

VI. Potential Additional Analyses to Perform

My opinions are based on the information received and available as of the date of my report. I will consider any additional documents or information that becomes available after the date of this report. I will also consider issues raised at my deposition. Any of this additional information may cause me to change my opinions, and I may supplement this report accordingly.

VII. Compensation

I am being compensated at a rate of \$400 per hour. Staff working at my direction billed at rates between \$115 and \$300 per hour.

2 - Grcg Hallman CV

GREG HALLMAN

Ph.D. Finance,
University of Texas at Austin

M.B.A. Finance,
Tulane University

B.A. Chemistry,
University of Virginia

Dr. Greg Hallman is a member of the faculty in the finance department of the University of Texas' McCombs School of Business where he teaches graduate-level courses in investments, real estate finance (mortgage-backed securities), corporate finance, and valuation. In addition to his work at the University of Texas, Dr. Hallman has testified extensively on matters involving securities, valuation, intellectual property, and commercial damage issues. He holds a Ph.D. in finance from the University of Texas at Austin, an M.B.A. from Tulane University and a B.A. in chemistry from the University of Virginia.

PROFESSIONAL EXPERIENCE

2002–Present *Lecturer in Corporate Finance, Investments, and Real Estate Finance*,
University of Texas at Austin, McCombs Graduate School of Business,
Department of Finance

- Awarded "Best Professor" by Alpha Kappa Psi business fraternity
- Named to MBA Faculty Honor Roll: 2002–2007

2006, 2007 Visiting Professor of Finance, Instituto de Empresa, Madrid, Spain

1999–2002 *Managing Director* (2001–2002), *Director* (1999–2001); InteCap, Inc.

1997, 1998 *Finance Instructor*, University of California, Berkeley-Extension

1996–1999 *Consultant*, PHB Hagler Bailly, Inc.

1993–1995 *Finance Instructor*, University of Texas at Austin

1988–1990 *Senior Financial Analyst*, HPI Healthcare, Inc.

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PUBLICATIONS AND RESEARCH PAPERS

"Business Valuation: Adjusted Present Value (APV) Method." *Litigation Services Handbook: The Role of the Financial Expert*, Roman L. Weil, Peter B. Frank, Christian W. Hughes, Michael J. Wagner, eds., Fourth Edition, John Wiley and Sons, 2007 (co-authored with Bonnie J. Goldsmith).

"Carrots and Sticks: The Threat of Dismissal and Incentive Compensation." Hallman, Greg, Hartzell, Jay C. and Parsons, Chris, (June 2005), McCombs Research Paper Series, available at SSRN: <http://ssrn.com/abstract=558749>

"Real Options Applications for Telecommunications Deregulation." With Chris McClain. *Real Options: The New Investment Theory and Its Implications for Telecommunications Economics*, James Allaman and Eli Noam, eds., Boston: Kluwer Academic Press, 1999.

"Tax Effects of Discount Rates in Taxable Damage Awards." With Michael J. Wagner. *CPA Expert*, winter 1999.

PRESENTATIONS AND PROFESSIONAL MEETINGS

Discussant for "Forecasting Real Estate Cash Flows: Evidence on the Quality of FFO Forecasts," 2004 Financial Management Association Annual Meeting, New Orleans, Louisiana.

"Statistical Regression in Litigation," 2000 AICPA National Advanced Litigation Services Conference, October 17, 2000, Beverly Hills, California.

"Advanced Issues in Determining Discount and Growth Rates," 1997 AICPA National Advanced Litigation Services Conference, October 16, 1997, Las Vegas, Nevada (co-presented with Michael J. Wagner).

TESTIMONY AND EXPERT REPORTS

County of Solano v. Lionsgate Corporation State of California, State of California, Office of Administrative Hearings; arbitration and deposition testimony: a statistical analysis of construction cost overruns on County bridge projects. (1998)

Steimle v. Steimle, Superior Court of the State of California, County of San Francisco; trial and deposition testimony: an analysis of executive compensation and community and separate character of executive stock options. (1999)

Kevin L. Guertin v. Home Depot, United States District Court, Northern District of California, San Jose Division; federal Rule 26 report: an analysis and valuation of employee stock options. (2000)

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Barnford v. Barnford, Superior Court of the State of California, County of San Mateo; deposition testimony: an analysis of executive compensation and community and separate character of executive stock options, and analysis of community and separate investment risk profiles. (2000)

Brent H. Beebe and Marsha A. Beebe v. Charles Kelson et. al, United States District Court, Eastern District of California; deposition testimony and declaration: a statistical analysis for the California Department of Justice regarding alleged price-fixing in State contracts. (2000)

ARCH Development Partners; fairness opinion: valuation of preferred stock in six early stage (pre-public) technology ventures. (2000)

Provision Dental Systems, Inc. v. Robert Shiller, American Arbitration Association, Case no. 74 116 01083 00 LDG; arbitration testimony: valuation of private equity and calculation of lost earnings. (2001)

BankAmerica Corp. Securities Litigation, United States District Court, Eastern District of Missouri; federal rule 26 report and deposition testimony: a calculation of damages suffered by class in class-action securities litigation related to merger of BankAmerica and Nationsbank. (2001)

Oracle Corporation v. Pier Carlo Falotti, United States District Court, Northern District of California, San Francisco Division; Federal Rule 26 report and deposition testimony: a calculation of damages suffered by Mr. Falotti from lost Oracle stock options due to alleged improper termination. (2001)

George J. Zeller v. America Online, United States District Court, Eastern District of Virginia, Alexandria Division; Federal Rule 26 report: a rebuttal report filed regarding calculation of damages suffered by Mr. Zeller. (2001)

Ronald J. Arnold v. America Online, Superior Court of the State of California, County of Santa Clara; Deposition testimony: a rebuttal to plaintiff's expert regarding calculation of damages suffered by Mr. Arnold and valuation of employee stock options and lost wages. (2002)

Rebecca Aaronson v. Xerox, United States District Court, Northern District of California, San Francisco Division; Federal Rule 26 report: a calculation of damages suffered by Ms. Aaronson from wrongful termination; rebuttal to plaintiff's expert. (2002)

Lawrence Spiler v. Xerox, United States District Court, Northern District of California, San Francisco Division; Federal Rule 26 report: a calculation of damages suffered by Mr. Spiler from wrongful termination; rebuttal to plaintiff's expert. (2002)

VFB L.L.C. v. Campbell Soup Company, United States District Court, Northern District of Delaware; trial, deposition, and Federal Rule 26 report: a business valuation and calculation of damages suffered by creditors from bankruptcy of Vlasic Foods International (a spin-off from Campbell's Soup Company). (2004)

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Latin American Courier Inc. and Pegaso Express S.A. v. Airborne, Inc. and DHL Holdings (USA) et. al., in the District Court, 285th Judicial District, Bexar County, Texas; trial, deposition, and Federal Rule 26 report: a calculation of lost profits related to express package shipping into and out of Mexico; calculation of various elements of commercial damages. (2005)

Matter between *Applied Mechanical Corporation and Daniel J. Tobin*; Mediation; Testimony at mediation: a business valuation; valuation of private equity holdings. (2005)

Carriage Way Limited Partnership v. The National Life Insurance Co., United States District Court, Eastern District of Michigan, Southern Division; Federal Rule 26 report, affidavit, deposition: a commercial mortgage prepayment calculation and interpretation. (2005)

Elaine Trahan, Individually and on behalf of all others similarly situated vs. Long Beach Mortgage Company and Washington Mutual Bank, F.A.; United States District Court for the Eastern District of Texas, Lufkin Division; Affidavit: home equity loan mortgage design (2006)

Stephen Johnston et. al., vs. Baran Group, et. al., In the Superior Court, State of Georgia, Civil Case no. 2004CF89313; Federal Rule 26 report, depositions: calculation of damages suffered by shareholders related to sale of o2 Wireless, a publicly traded telecommunications equipment company. (2006)

Matter between *Endocare Inc. vs. KPMG*; Mediation; Testimony at mediation re: direct costs and costs of financial distress suffered by Endocare due to alleged accounting and auditing insufficiencies on the part of KPMG. (2006)

Watchguard Technologies, Inc. v. Michael N. Valentine and SonicWall, Inc., United States District Court for the Northeastern Division of Texas, Dallas Division; Federal Rule 26 report and deposition: calculation of damages related to theft of trade secret claim. (2006)

Stonehill-PRM WC I, L.P., v. Chasco Constructors Ltd., L.L.P. and Safeco Insurance Company of America, United States District Court, Travis County, Texas; report and deposition; valuation of a student apartment complex in Austin, TX related to a breach of contract claim regarding construction. (2007)

In Re: Chaparral Resources Inc. Shareholders Litigation, In the Court of Chancery of the State of Delaware in and for New Castle County; C.A. No. 2001-N; report, deposition, and trial; analysis of oil company (Chaparral) stock price in relation to a merger bid from Lukoil (2007)

3 – Documents Considered List

In re TyCom Ltd. Securities Litigation

Document index

Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
ATYC-AR 028 0000018286	ATYC-AR 028 0000018294	4/17/2001	Outline	Tyco Q1-01 Investment Community Conference Call Talking Points
ATYC-TC- 00030065	ATYC-TC- 00030076		Outline	TyCom Q1 FY01 Investment Community Conference Call - Talking Points
ATYC-TC- 00030055	ATYC-TC- 00030064		Outline	TyCom Q2FY01 Investment Community Conference Call - Talking Points
ATYC-21130063	ATYC-2113063		Outline	TyCom Q2FY01 Investment Community Conference Call - Talking Points
ATYC-21130093	ATYC-21130093		Outline	TyCom Q400 Investment Community Conference Call - Talking Points
ATYC-21134523	ATYC-21134529		Outline	TyCom Q400 Investment Community Conference Call - Talking Points
ATYC-TC- 00030038	ATYC-TC- 00030054		Outline	TyCom Q3FY01 Investment Community Conference Call - Talking Points
ATYC-21130119	ATYC-21130122		Outline	Tyco Q300 Investment Community Conference Call Talking Points
ATYC-08556977	ATYC-08556989		Outline	TyCom Q400 Investment Community Conference Call - Talking Points and Q&A
ATYC-21130107	ATYC-21130115		Outline	TyCom Q400 Investment Community Conference Call - Talking Points
		10/27/2006	Deposition	Peter Ferris Deposition, October 27, 2006
		8/28/2006	Deposition	Judith Czelusniak Deposition, August 28, 2006
CITI- TYCOM003408	CITI- TYCOM003434	7/6/2000	Memo	Salomon Smith Barney Equity Commitment Committee Memorandum, July 6, 2000
CITI- TYCOM003435	CITI- TYCOM003490		Presentation	Salomon Smith Barney Company Overview Slideshow
CITI- TYCOM004749	CITI- TYCOM004932	7/12/2000	Roadshow	Salomon Smith Barney TyCom Roadshow
ATYC-25222284	ATYC-25222350		Overview	Resource
		7/7/2000	Financials	TyCom Projected Financials
ATYC-TC- 00031099	ATYC-TC- 00031230	11/14/2001	Documents	Documents Requested by Ms. Hope Duffy with the NYSE Regarding Offer by Tyco to Acquire the Remaining Public Interests of TyCom
TYCOM 000957	TYCOM 000977	8/31/2001	Pricing	Pricing as of 8/3/01
		2/18/2005	Motion to Dismiss	Motion of Tyco International LTD., TyCom LTD, and Neil R. Gravey to Dismiss the Complaint
		1/6/2006	Court Order	Court Order
YANKEE000001	YANKEE00006	2/7/2000	Assessment	Perry Deposition Exhibit 3: TheYankee Group - Assessing Demand for the TyCom Global Network

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Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
PLAINTIFF(TYC OM) - 03219	PLAINTIFF(TYC OM) - 03274		Presentation	Perry Deposition Exhibit 6: The Yankee Group - Global Network Demand and Market Opportunity
			Presentation	Perry Deposition Exhibit 7: The Yankee Group - Global Network Demand and Market Opportunity
YANKEE000334	YANKEE000389		Presentation	Perry Deposition Exhibit 8: The Yankee Group - Global Network Demand and Market Opportunity
YANKEE000213	YANKEE000333		Presentation	Perry Deposition Exhibit 9: The Yankee Group - Global Network Demand and Market Opportunity
ATYC-20860344	ATYC-20860590		Presentation	Perry Deposition Exhibit 19: The Yankee Group - Final Report to TyCom: Assessing Demand for Bandwidth Capacity
TYCM1 000387	TYCM1 000889		Meeting	Perry Deposition Exhibit (number unknown): The Yankee Group - TyCom
			Report	Ovum Report: The Bandwidth Explosion
			Complaint	Consolidated Securities Class Action Complaint
			Opinion	TyCom - District Court Opinion
			Opposition	Opposition to Class Certification Motion
		10/19/2006	Deposition	Deposition of R. Jackson Blackstock
		10/19/2006	Deposition	Deposition of R. Jackson Blackstock: Exhibits 1 - 49
		8/28/2006	Exhibits	Deposition of Judith Czelusniak
		8/28/2006	Deposition	Deposition of Judith Czelusniak: Exhibits 1 - 60
		11/2/2006	Exhibits	Dockendorff Exhibits 1 - 17
		10/27/2006	Exhibits	Deposition of Peter Ferris
		10/27/2006	Deposition	Deposition of Peter Ferris: Exhibits 1 - 42
		10/10/2006	Deposition	Deposition of Frederick Hamilton
		10/10/2006	Deposition	Deposition of Frederick Hamilton: Exhibits 1 - 16
		11/17/2006	Exhibits	Hayes Exhibits 1-25
		12/9/2006	Exhibits	Deposition of Ralph Hohmann
		12/9/2006	Deposition	Deposition of Ralph Hohmann: Exhibits 1 - 5
		12/8/2006	Exhibits	Deposition of Byron Kalogerou
		12/8/2006	Deposition	Deposition of Byron Kalogerou: Exhibits 1 - 34
		12/18/2006	Exhibits	Deposition of Travis Kassay
		12/18/2006	Deposition	Deposition of Travis Kassay: Exhibits 1 - 35

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		10/12/2006	Deposition	Deposition of Stanley Kramer
			Deposition	
		10/12/2006	Exhibits	Deposition of Stanley Kramer: Exhibits 1 - 34
		1/12/2006	Deposition	Deposition of Sandra Kwon
			Deposition	
		1/12/2006	Exhibits	Deposition of Sandra Kwon: Exhibits 1 - 36
		11/29/2006	Deposition	Deposition of Thomas M. Lynch
			Deposition	
		11/29/2006	Exhibits	Deposition of Thomas M. Lynch: Exhibits 1 - 20
		11/17/2006	Deposition	Deposition of Kathy Manning
			Deposition	
		11/17/2006	Exhibits	Deposition of Kathy Manning: Exhibits 1 - 36
		10/26/2006	Deposition	Deposition of William Marra
			Deposition	
		10/26/2006	Exhibits	Deposition of William Marra: Exhibits 1 - 20
		12/4/2006	Deposition	Deposition of Carlos Perry
			Deposition	
		12/4/2006	Exhibits	Deposition of Carlos Perry: Exhibits 1 - 20
		12/1/2006	Deposition	Deposition of Daniel P. Walsh
			Deposition	
		12/1/2006	Exhibits	Deposition of Daniel P. Walsh: Exhibits 1 - 28
ATYCC-08616858	ATYCC-08616860	5/10/2001	Email	May 10th Email from Peter Ferris to Neil Garvey
ATYC-TC-00030088	ATYC-TC-00030089		Explanation	"How to Read the Tycom Income Statement"
LYNT5000010504	LYNT5000010504	7/12/2000	Spreadsheet	TSSL Market View
LYNT5000010860	LYNT5000010860	7/7/2000	Spreadsheet	TSSL Market View
LYNT5000011353	LYNT5000011353	6/29/2000	Spreadsheet	TSSL Market View
LYNT5000012022	LYNT5000012022	5/11/2000	Spreadsheet	TSSL Market View
LYNT5000012611	LYNT5000012611	4/6/2000	Spreadsheet	TSSL Market View
LYNT5000012848	LYNT5000012848	2/25/2000	Spreadsheet	TSSL Market View
LYNT5000013349	LYNT5000013349		Document	Executive Summary - Revenues and Costs
LYNT5000013762	LYNT5000013762	2/21/2000	Spreadsheet	TSSL Market View
LYNT5000013958	LYNT5000013958	2/12/2000	Spreadsheet	TSSL Market View

In re TyCom Ltd. Securities Litigation

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LYNT5000014258				
8	LYNT5000014258	1/5/2000	Spreadsheet	TSSL Market View
LYNT5000014496				
6	LYNT5000014496	12/22/1999	Spreadsheet	TSSL Market View
YAMM2002001886	YAMM2002001886			
86	6		Spreadsheet	Autosplice & AMP (Japan) Integration Plan
YAMM2002002090	YAMM2002002090			Hyperion vs. Tyco Electronics Data Warehouse
90	0		Spreadsheet	(TED) - Differences in Trade Sales - Detail
YAMM2002002415	YAMM2002002415			
15	5		Spreadsheet	Tyco electronics group - Forecast Input File v2.0
ATYC-25742743	ATYC-25742743	1/25/2000	Email	Email from Patricia Brown with TSSL Market View - 2/25/00 Attached
ATYC-25742769	ATYC-25742844	2/25/2000	Spreadsheet	TSSL Market View Final
LYNT5000014495				
5	LYNT5000014495	12/21/2000	Spreadsheet	Banker TSSL Spreadsheet
LYNT5000013957				
7	LYNT5000013957	2/11/2000	Spreadsheet	TSSL Market View
LYNT5000013761				
LYNT5000013761	LYNT5000013761	2/21/2000	Spreadsheet	TSSL Market View
LYNT5000013347				
7	LYNT5000013347	2/22/2000	Spreadsheet	TSSL Market View
LYNT5000012847				
7	LYNT5000012847	2/25/2000	Spreadsheet	TSSL Market View
LYNT5000012610				
0	LYNT5000012610	2/29/2000	Spreadsheet	TSSL Market View
ATYC-12113041	ATYC-12113077	7/2/2000	Analyst Report	Bank of America Analyst Report - July 2, 2000
ATYC-23412034	ATYC-23412073	8/21/2000	Analyst Report	Bank of America Analyst Report - August 21, 2000
ATYC-10921024	ATYC-10921035	1/9/2001	Analyst Report	Bank of America Analyst Report - January 9, 2001
ATYC-28626127	ATYC-28626141	5/16/2001	Analyst Report	Bank of America Analyst Report - May 16, 2001
ATYC-29283388	ATYC-29283391	5/24/2001	Analyst Report	Bank of America Analyst Report - May 24, 2001
ATYC-23412175	ATYC-23412201	8/18/2000	Analyst Report	Bear Stearns Analyst Report - August 18, 2000
ATYC-08588661	ATYC-08588664	1/17/2001	Analyst Report	Bear Stearns Analyst Report - January 17, 2001
ATYCC-08572153	ATYCC-08572158	7/18/2001	Analyst Report	Bear Stearns Analyst Report - July 18, 2001

In re TyCom Ltd. Securities Litigation

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Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
ATYC-05170974	ATYC-05170997	5/30/2000	Research Call	Bernstein Research call - May 30, 2000
		3/30/2001	Analyst Report	Credit Suisse First Boston Analyst Report - March 30, 2001
		4/19/2001	Analyst Report	Credit Suisse First Boston Analyst Report - April 19, 2001
ATYC-10920786	ATYC-10920839	9/15/2000	Analyst Report	Credit Suisse First Boston Analyst Report - September 15, 2000
ATYCC-05952575	ATYCC-05952584	6/29/2001	Analyst Report	Credit Suisse First Boston Analyst Report - June 29, 2001
ATYC-05401228	ATYC-05401228	10/20/2000	Analyst Report	Credit Suisse First Boston Analyst Report - October 20, 2000
ATYC-05404058	ATYC-05404058	10/23/2000	Analyst Report	Credit Suisse First Boston Analyst Report - October 23, 2000
ATYC-03917421	ATYC-03917475	9/12/2000	Analyst Report	Credit Suisse First Boston Analyst Report - September 12, 2000
ATYC-27960436	ATYC-27960452	1/23/2001	Analyst Report	Deutsche Bank - January 23, 2001
		4/3/2001	Analyst Report	Deutsche Bank - April 3, 2001
ATYCC-08618547	ATYCC-08618567	2/20/2001	Analyst Report	Goldman Sachs - February 20, 2001
GS-TYCOM17456	GS-TYCOM17478	8/9/2000	Analyst Report	Goldman Sachs - August 9, 2000
ATYC-10932711	ATYC-10932819	5/1/2001	Analyst Report	Goldman Sachs - May 1, 2001
ATYC-10932642	ATYC-10932643	4/4/2001	Analyst Report	Goldman Sachs - April 4, 2001
ATYCC-08604353	ATYCC-08604466	4/12/2001	Analyst Report	Goldman Sachs - April 12, 2001
ATYCC-08620543	ATYCC-08620562	11/16/2000	Analyst Report	Goldman Sachs - November 16, 2000
ATYC-20858814	ATYC-20858881	8/21/2000	Analyst Report	JP Morgan - August 21, 2000
ATYC-29362992	ATYC-29363003	1/22/2001	Analyst Report	JP Morgan - January 22, 2001
ATYC-28201683	ATYC-28201683	10/3/2000	Analyst Report	Lehman Brothers - October 3, 2000
ATYC-25222732	ATYC-25222732	9/20/2000	Analyst Report	McDonald Investment - September 20, 2000
ATYC-28201683	ATYC-28201683	9/20/2000	Analyst Report	McDonald Investment - September 20, 2000
ATYCC-08603550	ATYCC-08603580	8/21/2000	Analyst Report	Merrill Lynch - August 21, 2000

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TYCOM-00638	TYCOM-00639	8/11/2000	Note Analyst	Merrill Lynch - Intraday Special Note - August 11, 2000
ATYC-23412141	ATYC-23412174	8/22/2000	Report Analyst	Merrill Lynch - August 22, 2000
ATYC-05268215	ATYC-05268215	12/7/2000	Report Analyst	Merrill Lynch - December 7, 2000
ATYC-05159562	ATYC-05159597	3/19/2001	Report Analyst	Merrill Lynch - March 19, 2001
ATYC-25414974	ATYC-25414977	3/30/2001	Report Analyst	Merrill Lynch - March 30, 2001
ATYC-28201683	ATYC-28201683	11/13/2000	Report Analyst	Merrill Lynch - November 13, 2000
ATYCC-09424328	ATYCC-09424366	9/5/2001	Report Analyst	Morgan Stanley - September 5, 2001
ATYCC-08564108	ATYCC-08564115	10/5/2001	Report Analyst	Morgan Stanley - October 5, 2001
		10/18/2000	Report Analyst	Morgan Stanley - October 18, 2000
ATYC-28626293	ATYC-28626325	9/12/2000	Report Analyst	Morgan Stanley - September 12, 2000
ATYC-AR 010	ATYC-AR 010			
0000047737	0000047764	9/19/2001	Report Analyst	Morgan Stanley - September 19, 2001
ATYC-25414594	ATYC-25414617	9/19/2001	Report Analyst	Morgan Stanley - September 19, 2001
ATYC-21645826	ATYC-21645849	9/20/2001	Report Analyst	Morgan Stanley - September 20, 2001
ATYCC-08566451	ATYCC-08566483	9/5/2001	Report Analyst	Morgan Stanley - September 5, 2001
TYCOM-03866	TYCOM-03899	9/22/2000	Report	Morgan Stanley - September 22, 2000
ATYC-24592432	ATYC-24592473	Feb-01	European Tour	Salomon Smith Barney - European Tour Slideshow - February, 2001
ATYCC-08619085	ATYCC-08619123	1/8/2001	Slideshow Analyst	Salomon Smith Barney - Global Entertainment, Media and Telecommunications Conference, January 8, 2001
ATYC-10932609	ATYC-10932612	8/7/2001	Report Analyst	Salomon Smith Barney Report in Email Format - August 7, 2001
ATYC-23412207	ATYC-23412218	8/21/2000	Report Analyst	Salomon Smith Barney - August 21, 2000
ATYC-27960406	ATYC-27960407	2/26/2001	Report	Salomon Smith Barney - February 26, 2001
ATYC-27960405	ATYC-27960405	2/28/2001	Note	Salomon Smith Barney - Intraday Special Note - February 28, 2001

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ATYC-25222705	ATYC-25222708	10/24/2000	Analyst Report	Salomon Smith Barney - October 24, 2000
ATYC-10932108	ATYC-10932109	9/7/2000	Analyst Report	Salomon Smith Barney - September 7, 2000
		4/11/2001	Analyst Report	Salomon Smith Barney - April 11, 2001
		8/7/2001	Analyst Report	Salomon Smith Barney - August 7, 2001
ATYC-10919909	ATYC-10919952	Dec-00	Analyst Report	Thomson Financial - December, 2000
ATYC-23412202	ATYC-23412206	8/21/2000	Analyst Report	UBS Warburg - August 21, 2000
ATYC-28202001	ATYC-28202001	2/1/2001	Analyst Report	UBS Warburg - February 1, 2001
ATYCC-08581383	ATYCC-08581410	4/3/2001	Analyst Report	WCG Equity - April 3, 2001
ATYC-10932239	ATYC-10932266	4/11/2001	Analyst Report	WCG Equity - April 11, 2001
ATYC-05871587	ATYC-05871587	4/19/2001	Notes	WCG Equity - Morning Notes - April 19, 2001
ATYC-05933245	ATYC-05933245	7/19/2001	Notes	WCG Equity - Morning Notes - July 19, 2001
ATYC-05948654	ATYC-05948654	4/11/2001	Analyst Report	WCG Equity - April 11, 2001
		3/16/2007	Deposition	Walter Bailey Deposition - March 16, 2007
		3/16/2007	Exhibits	Walter Bailey Deposition: Exhibits 1-25
		1/25/2007	Deposition	Claire Calandra Deposition - January 25, 2007
		1/25/2007	Exhibits	Claire Calandra Deposition: Exhibits 1-31
		3/1/2007	Deposition	Michael Creedon Deposition and Exhibits - March 1, 2007
		3/1/2007	Exhibits	Michael Creedon Deposition: Exhibits 1-38
		1/31/2007	Deposition	Neil Garvey Deposition and Exhibits - January 31, 2007
		1/31/2007	Exhibits	Neil Garvey Deposition: Exhibits 1-33
		2/1/2007	Deposition	Andrew Kowalik Deposition - February 1, 2007
		2/1/2007	Exhibits	Andrew Kowalik Deposition: Exhibits 1-20
		2/2/2007	Deposition	Keith Mallinson Deposition and Exhibits - February 2, 2007
		2/2/2007	Exhibits	Keith Mallinson Deposition: Exhibits 1-8
		5/3/2007	Deposition	Keith Mallinson Deposition and Exhibits - May 3, 2007
		Various	SEC Filings	Tycom Public SEC Filings accessed via EDGAR.SEC.GOV

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Beginning Dates	Ending Dates	Document Date	Document Type	Document Title
			Financial Data	Tycom Stock Data, from CRSP, 2000-2001
			Financial Data	S&P 500 Index, from Bloomberg 2000-2001
			Financial Data	Williams Communications, Qwest Communications, Global Crossing, Level 3 Communications, 360 networks, and Metromedia Fiber Network Stock Data 2000-2001
			Court Filing	TyCom Consolidated Securities Class Action Complaint
			News Search	Lexis Nexis News Search on Tycom and Broadband Industry
			News Search	Various web searches on TyCom and Broadband industry
			News Article	"TyCom Announces Exercise of Over-Allotment Option in IPO" PR Newswire. August 8, 2000.
			News Article	"UBS Warburg "Initating Coverage with a Buy Rating and \$63 Price Target" August 21, 2000
			News Article	"TyCom Receives Landing Licenses for Transatlantic System " 8/22/2000, PR Newswire.
			News Article	"TyCom receives US\$82-million capacity order on transatlantic system" 1/17/2001 PR Newswire,
			News Article	"TyCom Announces Large Scale Expansion of Global Fleet" 11/17/2000 PR Newswire.
			News Article	"TyCom Signs \$171-Million Contract for Australia-Japan System" PR Newswire 8/10/2000
			News Article	"TyCom Announces \$100 Million Order From Asia Global Crossing" PR Newswire 8/24/2000.
			News Article	"TyCom to Upgrade Transatlantic Capacity to Meet Additional Demand, TyCom Global Network Deployment Remains on Schedule with Transatlantic System Slated for July Service; Company Opens European Capacity Sales Headquarters in London" PR Newswire, 2/26/2001.
			News Article	"Tyco International to Acquire The CIT Group" 3/13/2001.
			Internet Search	The Internet Archive archive of "www.submarinesystems.com/"
			Internet Search	Internet Source: http://web.archive.org/
			News Article	"TyCom Reports 16% Increase in Net Income for First Quarter; Construction of TyCom Global Network on Schedule" PR Newswire 1/17/2001

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Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
			News Article	"Finisar Corporation Announces Financial Results for Third Quarter Ended January 31, 2001 And Agreement to Acquire Marlow Industries, Inc." Business Wire 2/20/2001
			News Article	Berman, Dennis "Lucent Plans to Put Optical-Fiber Unity, One of Its Bright Spots, on Auction Block." Wall Street Journal 2/21/2001
			News Article	"ADC Reports First Quarter 2001 Results" Business Wire 2/21/2001.
			News Article	Goss, Ashely "Broadcom Lowers 1st-Quarter Forecast, Blames Slowing Economy" Bloomberg 3/6/2001.
			News Article	Moritz, Scott "JDS Uniphase Blares Another Warning as Fog Persists." TheStreet.com 3/6/2001
			News Article	"Lucent Technologies Pursuing Strategic Alternatives For its Optical Fiber Solutions Business" PR Newswire 3/14/2001.
			SEC Filings	Nextel 8-K SEC Filing, dated 3/14/2001
			News Article	"3Com Reports Fiscal Third Quarter Results in Line With Reduced Expectations" Business Wire 3/21/2001.
			SEC Filings	3/22/2001 Agere Systems Form S-1 SEC Filing;
			SEC Filings	3/15/2001 Agere Systems Form S-1 SEC Filing
			News Article	Koo, Carolyn "U.S. Wireless Carriers Slow Equipment Spending " TheStreet.com 3/21/2001;
			News Article	Willard, Cody, "Handicapping the Lindgame" TheStreet.com 3/22/01.
				GSTYCOM20837, produced in electronic format as GST-TSSL-7-21-C0.xls
				Ritter, Jay and Loughran, Tim. "Why has IPO Underpricing Changed Over Time?" Financial Management, 2004, vol. 33, issue 3.
			SEC Filing	Williams Communications 12/31/2000 10-K/A
			SEC Filing	Quest Communications International 12/31/2000 10-K
			SEC Filing	Global Crossing 12/31/2000 10-K
			SEC Filing	Level 3 Communications 12/31/2000 10-K
			SEC Filing	360 Networks Amendment No.1 to Form F-4 Filed 5/25/01
			SEC Filing	Metromedia International Group Form 10-K 12/31/01
				<i>Articles and sources specifically mentioned in the Text or Footnotes of the report are incorporated here by reference.</i>

GSTYCOM20837

4 – Stock Data

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
7/27/2000	TCM	TYCOM LTD	511,130	36.00	37,465,296
7/28/2000	TCM	TYCOM LTD	511,130	35.25	8,426,699
7/31/2000	TCM	TYCOM LTD	511,130	34.06	6,654,898
8/1/2000	TCM	TYCOM LTD	511,130	35.56	2,580,500
8/2/2000	TCM	TYCOM LTD	511,130	36.56	2,000,500
8/3/2000	TCM	TYCOM LTD	511,130	34.88	1,488,099
8/4/2000	TCM	TYCOM LTD	511,130	36.94	1,471,199
8/7/2000	TCM	TYCOM LTD	511,130	37.25	1,132,199
8/8/2000	TCM	TYCOM LTD	511,130	36.44	718,100
8/9/2000	TCM	TYCOM LTD	511,130	36.44	1,252,399
8/10/2000	TCM	TYCOM LTD	511,130	35.50	1,364,699
8/11/2000	TCM	TYCOM LTD	511,130	35.19	730,600
8/14/2000	TCM	TYCOM LTD	511,130	34.25	1,121,199
8/15/2000	TCM	TYCOM LTD	511,130	34.25	1,489,500
8/16/2000	TCM	TYCOM LTD	511,130	36.69	1,805,599
8/17/2000	TCM	TYCOM LTD	511,130	36.81	1,086,899
8/18/2000	TCM	TYCOM LTD	511,130	37.75	1,341,000
8/21/2000	TCM	TYCOM LTD	511,130	39.63	3,673,699
8/22/2000	TCM	TYCOM LTD	511,130	39.75	2,453,199
8/23/2000	TCM	TYCOM LTD	511,130	40.38	1,099,799
8/24/2000	TCM	TYCOM LTD	511,130	41.13	825,000
8/25/2000	TCM	TYCOM LTD	511,130	41.31	629,100
8/28/2000	TCM	TYCOM LTD	511,130	40.38	836,000
8/29/2000	TCM	TYCOM LTD	511,130	39.38	672,300
8/30/2000	TCM	TYCOM LTD	511,130	40.38	499,800
8/31/2000	TCM	TYCOM LTD	511,130	41.63	1,127,899
9/1/2000	TCM	TYCOM LTD	511,130	45.44	2,059,099
9/5/2000	TCM	TYCOM LTD	511,130	44.81	1,627,699
9/6/2000	TCM	TYCOM LTD	511,130	42.88	1,120,699
9/7/2000	TCM	TYCOM LTD	511,130	42.44	1,022,200
9/8/2000	TCM	TYCOM LTD	511,130	42.44	1,832,599
9/11/2000	TCM	TYCOM LTD	511,130	42.38	2,605,699
9/12/2000	TCM	TYCOM LTD	511,130	42.69	1,619,500
9/13/2000	TCM	TYCOM LTD	511,130	41.50	571,100
9/14/2000	TCM	TYCOM LTD	511,130	41.06	268,200
9/15/2000	TCM	TYCOM LTD	511,130	39.25	1,021,500
9/18/2000	TCM	TYCOM LTD	511,130	36.94	834,600
9/19/2000	TCM	TYCOM LTD	511,130	38.75	1,342,399
9/20/2000	TCM	TYCOM LTD	511,130	38.50	1,062,000
9/21/2000	TCM	TYCOM LTD	511,130	37.75	582,900
9/22/2000	TCM	TYCOM LTD	511,130	35.56	2,164,199
9/25/2000	TCM	TYCOM LTD	511,130	37.50	1,551,399
9/26/2000	TCM	TYCOM LTD	511,130	39.13	830,800

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
9/27/2000	TCM	TYCOM LTD	511,130	37.50	766,800
9/28/2000	TCM	TYCOM LTD	511,130	38.63	650,000
9/29/2000	TCM	TYCOM LTD	520,300	38.38	360,800
10/2/2000	TCM	TYCOM LTD	520,300	37.38	321,900
10/3/2000	TCM	TYCOM LTD	520,300	36.63	291,500
10/4/2000	TCM	TYCOM LTD	520,300	35.25	1,007,600
10/5/2000	TCM	TYCOM LTD	520,300	36.38	1,368,099
10/6/2000	TCM	TYCOM LTD	520,300	34.81	655,800
10/9/2000	TCM	TYCOM LTD	520,300	34.94	789,300
10/10/2000	TCM	TYCOM LTD	520,300	33.50	398,500
10/11/2000	TCM	TYCOM LTD	520,300	33.00	611,100
10/12/2000	TCM	TYCOM LTD	520,300	31.50	876,400
10/13/2000	TCM	TYCOM LTD	520,300	32.38	1,812,799
10/16/2000	TCM	TYCOM LTD	520,300	30.00	545,200
10/17/2000	TCM	TYCOM LTD	520,300	26.88	5,300,099
10/18/2000	TCM	TYCOM LTD	520,300	28.25	1,778,099
10/19/2000	TCM	TYCOM LTD	520,300	31.94	899,000
10/20/2000	TCM	TYCOM LTD	520,300	32.00	1,224,500
10/23/2000	TCM	TYCOM LTD	520,300	32.56	633,200
10/24/2000	TCM	TYCOM LTD	520,300	35.25	1,179,799
10/25/2000	TCM	TYCOM LTD	520,300	33.88	640,200
10/26/2000	TCM	TYCOM LTD	520,300	32.00	593,700
10/27/2000	TCM	TYCOM LTD	520,300	31.38	401,300
10/30/2000	TCM	TYCOM LTD	520,300	31.06	507,700
10/31/2000	TCM	TYCOM LTD	520,300	33.50	954,800
11/1/2000	TCM	TYCOM LTD	520,300	33.19	377,300
11/2/2000	TCM	TYCOM LTD	520,300	33.75	456,600
11/3/2000	TCM	TYCOM LTD	520,300	35.00	553,000
11/6/2000	TCM	TYCOM LTD	520,300	33.38	395,300
11/7/2000	TCM	TYCOM LTD	520,300	33.25	439,700
11/8/2000	TCM	TYCOM LTD	520,300	30.81	398,700
11/9/2000	TCM	TYCOM LTD	520,300	30.00	704,000
11/10/2000	TCM	TYCOM LTD	520,300	28.13	593,400
11/13/2000	TCM	TYCOM LTD	520,300	28.44	816,300
11/14/2000	TCM	TYCOM LTD	520,300	31.63	822,300
11/15/2000	TCM	TYCOM LTD	520,300	30.38	434,500
11/16/2000	TCM	TYCOM LTD	520,300	28.69	360,200
11/17/2000	TCM	TYCOM LTD	520,300	27.00	1,156,000
11/20/2000	TCM	TYCOM LTD	520,300	25.75	508,900
11/21/2000	TCM	TYCOM LTD	520,300	26.44	945,200
11/22/2000	TCM	TYCOM LTD	520,300	26.06	395,700
11/24/2000	TCM	TYCOM LTD	520,300	26.44	201,000
11/27/2000	TCM	TYCOM LTD	520,300	26.63	330,300

Source: CRSP

TyCom Stock Data

SHARES OUTSTANDING					
DATE	TICKER	COMPANY NAME	(000's)	PRICE	VOLUME
11/28/2000	TCM	TYCOM LTD	520,300	25.00	1,907,099
11/29/2000	TCM	TYCOM LTD	520,300	23.13	1,333,000
11/30/2000	TCM	TYCOM LTD	520,300	20.88	2,319,899
12/1/2000	TCM	TYCOM LTD	520,300	22.75	1,126,100
12/4/2000	TCM	TYCOM LTD	520,300	22.50	1,127,200
12/5/2000	TCM	TYCOM LTD	520,300	24.50	1,333,700
12/6/2000	TCM	TYCOM LTD	520,300	22.75	614,600
12/7/2000	TCM	TYCOM LTD	520,300	21.13	606,400
12/8/2000	TCM	TYCOM LTD	520,300	23.63	425,700
12/11/2000	TCM	TYCOM LTD	520,300	25.63	1,530,300
12/12/2000	TCM	TYCOM LTD	520,300	25.75	715,700
12/13/2000	TCM	TYCOM LTD	520,300	24.75	196,200
12/14/2000	TCM	TYCOM LTD	520,300	23.69	508,500
12/15/2000	TCM	TYCOM LTD	520,300	21.50	910,100
12/18/2000	TCM	TYCOM LTD	520,300	21.94	284,100
12/19/2000	TCM	TYCOM LTD	520,300	22.75	451,800
12/20/2000	TCM	TYCOM LTD	520,300	22.13	625,000
12/21/2000	TCM	TYCOM LTD	520,300	20.19	1,194,900
12/22/2000	TCM	TYCOM LTD	520,300	20.75	825,300
12/26/2000	TCM	TYCOM LTD	520,300	19.69	452,700
12/27/2000	TCM	TYCOM LTD	520,300	19.88	929,200
12/28/2000	TCM	TYCOM LTD	520,300	22.81	987,100
12/29/2000	TCM	TYCOM LTD	520,390	22.38	780,200
1/2/2001	TCM	TYCOM LTD	520,390	21.06	579,100
1/3/2001	TCM	TYCOM LTD	520,390	23.56	911,200
1/4/2001	TCM	TYCOM LTD	520,390	26.00	1,386,700
1/5/2001	TCM	TYCOM LTD	520,390	26.31	487,800
1/8/2001	TCM	TYCOM LTD	520,390	26.19	1,350,700
1/9/2001	TCM	TYCOM LTD	520,390	27.00	797,300
1/10/2001	TCM	TYCOM LTD	520,390	27.50	493,100
1/11/2001	TCM	TYCOM LTD	520,390	28.19	900,000
1/12/2001	TCM	TYCOM LTD	520,390	28.81	646,200
1/16/2001	TCM	TYCOM LTD	520,390	27.75	951,500
1/17/2001	TCM	TYCOM LTD	520,390	26.00	1,365,600
1/18/2001	TCM	TYCOM LTD	520,390	24.50	2,269,900
1/19/2001	TCM	TYCOM LTD	520,390	24.88	2,369,000
1/22/2001	TCM	TYCOM LTD	520,390	23.88	569,200
1/23/2001	TCM	TYCOM LTD	520,390	25.25	772,700
1/24/2001	TCM	TYCOM LTD	520,390	27.69	763,200
1/25/2001	TCM	TYCOM LTD	520,390	27.88	837,500
1/26/2001	TCM	TYCOM LTD	520,390	28.06	570,300
1/29/2001	TCM	TYCOM LTD	520,390	28.15	406,300
1/30/2001	TCM	TYCOM LTD	520,390	30.10	471,200

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
1/31/2001	TCM	TYCOM LTD	520,390	28.30	517,800
2/1/2001	TCM	TYCOM LTD	520,390	29.09	556,300
2/2/2001	TCM	TYCOM LTD	520,390	29.15	382,400
2/5/2001	TCM	TYCOM LTD	520,390	30.10	272,700
2/6/2001	TCM	TYCOM LTD	520,390	31.34	605,800
2/7/2001	TCM	TYCOM LTD	520,390	29.65	663,100
2/8/2001	TCM	TYCOM LTD	520,390	28.71	411,300
2/9/2001	TCM	TYCOM LTD	520,390	26.65	579,900
2/12/2001	TCM	TYCOM LTD	520,390	28.26	453,900
2/13/2001	TCM	TYCOM LTD	520,390	29.75	492,600
2/14/2001	TCM	TYCOM LTD	520,390	28.71	556,800
2/15/2001	TCM	TYCOM LTD	520,390	27.70	288,900
2/16/2001	TCM	TYCOM LTD	520,390	26.72	487,900
2/20/2001	TCM	TYCOM LTD	520,390	25.09	747,000
2/21/2001	TCM	TYCOM LTD	520,390	22.40	1,769,900
2/22/2001	TCM	TYCOM LTD	520,390	20.70	1,280,900
2/23/2001	TCM	TYCOM LTD	520,390	19.93	1,068,200
2/26/2001	TCM	TYCOM LTD	520,390	20.99	1,227,300
2/27/2001	TCM	TYCOM LTD	520,390	20.00	1,104,400
2/28/2001	TCM	TYCOM LTD	520,390	19.75	1,702,700
3/1/2001	TCM	TYCOM LTD	520,390	18.40	1,013,100
3/2/2001	TCM	TYCOM LTD	520,390	18.04	4,842,200
3/5/2001	TCM	TYCOM LTD	520,390	19.23	1,324,300
3/6/2001	TCM	TYCOM LTD	520,390	19.97	464,400
3/7/2001	TCM	TYCOM LTD	520,390	18.25	921,700
3/8/2001	TCM	TYCOM LTD	520,390	18.40	587,400
3/9/2001	TCM	TYCOM LTD	520,390	17.00	1,737,200
3/12/2001	TCM	TYCOM LTD	520,390	16.00	2,798,800
3/13/2001	TCM	TYCOM LTD	520,390	15.60	2,912,100
3/14/2001	TCM	TYCOM LTD	520,390	13.50	2,719,400
3/15/2001	TCM	TYCOM LTD	520,390	13.20	1,681,100
3/16/2001	TCM	TYCOM LTD	520,390	13.85	1,503,000
3/19/2001	TCM	TYCOM LTD	520,390	13.99	881,300
3/20/2001	TCM	TYCOM LTD	520,390	13.69	814,900
3/21/2001	TCM	TYCOM LTD	520,390	11.84	1,869,100
3/22/2001	TCM	TYCOM LTD	520,390	10.48	3,113,100
3/23/2001	TCM	TYCOM LTD	520,390	11.56	4,273,000
3/26/2001	TCM	TYCOM LTD	520,390	12.98	3,021,700
3/27/2001	TCM	TYCOM LTD	520,390	13.10	2,093,600
3/28/2001	TCM	TYCOM LTD	520,390	13.24	4,459,800
3/29/2001	TCM	TYCOM LTD	520,390	13.65	5,096,200
3/30/2001	TCM	TYCOM LTD	520,390	13.15	2,412,800
4/2/2001	TCM	TYCOM LTD	520,390	12.56	625,800

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
4/3/2001	TCM	TYCOM LTD	520,390	10.95	3,098,900
4/4/2001	TCM	TYCOM LTD	520,390	9.99	1,299,400
4/5/2001	TCM	TYCOM LTD	520,390	11.45	2,711,300
4/6/2001	TCM	TYCOM LTD	520,390	11.59	2,174,700
4/9/2001	TCM	TYCOM LTD	520,390	11.39	467,400
4/10/2001	TCM	TYCOM LTD	520,390	12.95	2,342,000
4/11/2001	TCM	TYCOM LTD	520,390	14.09	2,187,200
4/12/2001	TCM	TYCOM LTD	520,390	13.84	1,262,900
4/16/2001	TCM	TYCOM LTD	520,390	13.64	550,000
4/17/2001	TCM	TYCOM LTD	520,390	14.53	1,543,600
4/18/2001	TCM	TYCOM LTD	520,390	18.25	3,049,500
4/19/2001	TCM	TYCOM LTD	520,390	16.40	3,156,200
4/20/2001	TCM	TYCOM LTD	520,390	16.03	1,744,300
4/23/2001	TCM	TYCOM LTD	520,390	15.94	399,600
4/24/2001	TCM	TYCOM LTD	520,390	15.25	506,800
4/25/2001	TCM	TYCOM LTD	520,390	14.99	1,184,800
4/26/2001	TCM	TYCOM LTD	520,390	14.38	607,800
4/27/2001	TCM	TYCOM LTD	520,390	13.51	1,097,100
4/30/2001	TCM	TYCOM LTD	520,390	14.49	922,600
5/1/2001	TCM	TYCOM LTD	520,390	15.33	725,900
5/2/2001	TCM	TYCOM LTD	520,390	16.05	681,200
5/3/2001	TCM	TYCOM LTD	520,390	15.70	390,900
5/4/2001	TCM	TYCOM LTD	520,390	16.06	306,100
5/7/2001	TCM	TYCOM LTD	520,390	16.76	500,000
5/8/2001	TCM	TYCOM LTD	520,390	16.15	552,800
5/9/2001	TCM	TYCOM LTD	520,390	16.20	1,009,200
5/10/2001	TCM	TYCOM LTD	520,390	16.75	741,600
5/11/2001	TCM	TYCOM LTD	520,390	16.34	478,500
5/14/2001	TCM	TYCOM LTD	520,390	15.81	322,000
5/15/2001	TCM	TYCOM LTD	520,390	16.13	1,168,900
5/16/2001	TCM	TYCOM LTD	520,390	16.80	1,068,800
5/17/2001	TCM	TYCOM LTD	520,390	17.28	1,437,200
5/18/2001	TCM	TYCOM LTD	520,390	17.55	266,700
5/21/2001	TCM	TYCOM LTD	520,390	18.35	673,100
5/22/2001	TCM	TYCOM LTD	520,390	18.90	1,444,800
5/23/2001	TCM	TYCOM LTD	520,390	17.50	657,700
5/24/2001	TCM	TYCOM LTD	520,390	17.90	687,400
5/25/2001	TCM	TYCOM LTD	520,390	17.95	152,000
5/29/2001	TCM	TYCOM LTD	520,390	17.00	291,200
5/30/2001	TCM	TYCOM LTD	520,390	16.30	762,100
5/31/2001	TCM	TYCOM LTD	506,160	17.80	955,700
6/1/2001	TCM	TYCOM LTD	506,160	18.05	800,100
6/4/2001	TCM	TYCOM LTD	506,160	18.49	451,000

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
6/5/2001	TCM	TYCOM LTD	506,160	19.50	658,200
6/6/2001	TCM	TYCOM LTD	506,160	19.04	740,600
6/7/2001	TCM	TYCOM LTD	506,160	19.12	388,100
6/8/2001	TCM	TYCOM LTD	506,160	18.75	421,100
6/11/2001	TCM	TYCOM LTD	506,160	18.18	260,800
6/12/2001	TCM	TYCOM LTD	506,160	18.03	383,900
6/13/2001	TCM	TYCOM LTD	506,160	17.87	181,800
6/14/2001	TCM	TYCOM LTD	506,160	16.90	528,100
6/15/2001	TCM	TYCOM LTD	506,160	15.00	946,200
6/18/2001	TCM	TYCOM LTD	506,160	13.85	1,272,700
6/19/2001	TCM	TYCOM LTD	506,160	14.32	1,975,200
6/20/2001	TCM	TYCOM LTD	506,160	14.57	724,900
6/21/2001	TCM	TYCOM LTD	506,160	15.46	985,500
6/22/2001	TCM	TYCOM LTD	506,160	16.00	627,400
6/25/2001	TCM	TYCOM LTD	506,160	16.20	484,200
6/26/2001	TCM	TYCOM LTD	506,160	16.00	365,700
6/27/2001	TCM	TYCOM LTD	506,160	15.86	393,300
6/28/2001	TCM	TYCOM LTD	506,160	16.84	1,317,100
6/29/2001	TCM	TYCOM LTD	506,160	17.20	633,700
7/2/2001	TCM	TYCOM LTD	506,160	16.40	1,227,200
7/3/2001	TCM	TYCOM LTD	506,160	16.95	215,200
7/5/2001	TCM	TYCOM LTD	506,160	16.34	304,700
7/6/2001	TCM	TYCOM LTD	506,160	14.73	699,200
7/9/2001	TCM	TYCOM LTD	506,160	15.20	444,400
7/10/2001	TCM	TYCOM LTD	506,160	15.27	927,000
7/11/2001	TCM	TYCOM LTD	506,160	13.65	1,205,100
7/12/2001	TCM	TYCOM LTD	506,160	13.99	895,700
7/13/2001	TCM	TYCOM LTD	506,160	14.40	940,800
7/16/2001	TCM	TYCOM LTD	506,160	13.94	858,200
7/17/2001	TCM	TYCOM LTD	506,160	14.55	1,513,300
7/18/2001	TCM	TYCOM LTD	506,160	15.10	1,951,800
7/19/2001	TCM	TYCOM LTD	506,160	14.80	735,400
7/20/2001	TCM	TYCOM LTD	506,160	14.63	728,600
7/23/2001	TCM	TYCOM LTD	506,160	14.59	358,900
7/24/2001	TCM	TYCOM LTD	506,160	14.71	524,800
7/25/2001	TCM	TYCOM LTD	506,160	14.73	479,900
7/26/2001	TCM	TYCOM LTD	506,160	15.20	505,100
7/27/2001	TCM	TYCOM LTD	506,160	14.90	1,177,600
7/30/2001	TCM	TYCOM LTD	506,160	14.70	215,600
7/31/2001	TCM	TYCOM LTD	506,160	14.60	368,700
8/1/2001	TCM	TYCOM LTD	506,160	15.15	771,500
8/2/2001	TCM	TYCOM LTD	506,160	14.54	930,600
8/3/2001	TCM	TYCOM LTD	506,150	13.63	1,341,500

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
8/6/2001	TCM	TYCOM LTD	506,160	12.16	1,107,700
8/7/2001	TCM	TYCOM LTD	506,160	11.15	2,284,600
8/8/2001	TCM	TYCOM LTD	506,160	11.40	2,521,200
8/9/2001	TCM	TYCOM LTD	506,160	12.00	1,745,000
8/10/2001	TCM	TYCOM LTD	506,160	11.87	1,293,300
8/13/2001	TCM	TYCOM LTD	506,160	12.25	2,153,100
8/14/2001	TCM	TYCOM LTD	506,160	12.70	1,045,100
8/15/2001	TCM	TYCOM LTD	506,160	12.60	845,500
8/16/2001	TCM	TYCOM LTD	506,160	12.26	2,403,100
8/17/2001	TCM	TYCOM LTD	506,160	12.08	691,100
8/20/2001	TCM	TYCOM LTD	506,160	11.80	339,500
8/21/2001	TCM	TYCOM LTD	506,160	11.71	657,600
8/22/2001	TCM	TYCOM LTD	506,160	12.64	1,147,200
8/23/2001	TCM	TYCOM LTD	506,160	13.00	628,400
8/24/2001	TCM	TYCOM LTD	506,160	13.66	1,428,500
8/27/2001	TCM	TYCOM LTD	506,160	13.33	1,650,400
8/28/2001	TCM	TYCOM LTD	506,160	12.86	264,700
8/29/2001	TCM	TYCOM LTD	506,160	12.62	360,800
8/30/2001	TCM	TYCOM LTD	506,160	11.90	1,000,400
8/31/2001	TCM	TYCOM LTD	504,774	11.40	767,900
9/4/2001	TCM	TYCOM LTD	504,774	10.10	1,216,600
9/5/2001	TCM	TYCOM LTD	504,774	10.74	4,096,200
9/6/2001	TCM	TYCOM LTD	504,774	9.30	2,211,100
9/7/2001	TCM	TYCOM LTD	504,774	9.03	970,700
9/10/2001	TCM	TYCOM LTD	504,774	9.06	668,900
9/17/2001	TCM	TYCOM LTD	504,774	8.35	1,049,700
9/18/2001	TCM	TYCOM LTD	504,774	8.93	1,497,500
9/19/2001	TCM	TYCOM LTD	504,774	9.30	1,033,100
9/20/2001	TCM	TYCOM LTD	504,774	8.85	862,200
9/21/2001	TCM	TYCOM LTD	504,774	8.25	1,037,200
9/24/2001	TCM	TYCOM LTD	504,774	8.80	671,700
9/25/2001	TCM	TYCOM LTD	504,774	8.19	561,700
9/26/2001	TCM	TYCOM LTD	504,774	7.81	349,300
9/27/2001	TCM	TYCOM LTD	504,774	7.41	1,081,900
9/28/2001	TCM	TYCOM LTD	504,774	7.85	878,500
10/1/2001	TCM	TYCOM LTD	504,774	7.60	1,181,200
10/2/2001	TCM	TYCOM LTD	504,774	7.75	1,372,900
10/3/2001	TCM	TYCOM LTD	504,774	9.46	1,720,300
10/4/2001	TCM	TYCOM LTD	504,774	14.43	14,473,700
10/5/2001	TCM	TYCOM LTD	504,774	14.55	2,852,800
10/8/2001	TCM	TYCOM LTD	504,774	14.20	2,058,500
10/9/2001	TCM	TYCOM LTD	504,774	14.23	698,500
10/10/2001	TCM	TYCOM LTD	504,774	14.30	920,000

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
10/11/2001	TCM	TYCOM LTD	504,774	14.55	2,402,100
10/12/2001	TCM	TYCOM LTD	504,774	14.35	1,270,600
10/15/2001	TCM	TYCOM LTD	504,774	14.67	1,028,900
10/16/2001	TCM	TYCOM LTD	504,774	14.70	914,200
10/17/2001	TCM	TYCOM LTD	504,774	14.52	343,500
10/18/2001	TCM	TYCOM LTD	504,774	14.76	3,089,900
10/19/2001	TCM	TYCOM LTD	504,774	15.10	2,450,600
10/22/2001	TCM	TYCOM LTD	504,774	15.26	520,200
10/23/2001	TCM	TYCOM LTD	504,774	15.12	728,100
10/24/2001	TCM	TYCOM LTD	504,774	15.45	371,200
10/25/2001	TCM	TYCOM LTD	504,774	15.45	1,436,600
10/26/2001	TCM	TYCOM LTD	504,774	15.66	1,392,400
10/29/2001	TCM	TYCOM LTD	504,774	15.41	110,000
10/30/2001	TCM	TYCOM LTD	504,774	15.10	522,400
10/31/2001	TCM	TYCOM LTD	504,775	15.32	221,100
11/1/2001	TCM	TYCOM LTD	504,775	15.60	233,600
11/2/2001	TCM	TYCOM LTD	504,775	16.05	304,700
11/5/2001	TCM	TYCOM LTD	504,775	16.20	259,000
11/6/2001	TCM	TYCOM LTD	504,775	16.26	387,700
11/7/2001	TCM	TYCOM LTD	504,775	16.52	440,200
11/8/2001	TCM	TYCOM LTD	504,775	16.83	299,100
11/9/2001	TCM	TYCOM LTD	504,775	16.96	249,200
11/12/2001	TCM	TYCOM LTD	504,775	16.99	91,500
11/13/2001	TCM	TYCOM LTD	504,775	17.30	475,900
11/14/2001	TCM	TYCOM LTD	504,775	17.60	196,000
11/15/2001	TCM	TYCOM LTD	504,775	18.05	196,100
11/16/2001	TCM	TYCOM LTD	504,775	17.85	123,200
11/19/2001	TCM	TYCOM LTD	504,775	18.07	149,100
11/20/2001	TCM	TYCOM LTD	504,775	17.80	386,200
11/21/2001	TCM	TYCOM LTD	504,775	17.93	107,100
11/23/2001	TCM	TYCOM LTD	504,775	18.06	38,400
11/26/2001	TCM	TYCOM LTD	504,775	18.36	212,800
11/27/2001	TCM	TYCOM LTD	504,775	18.61	126,700
11/28/2001	TCM	TYCOM LTD	504,775	18.21	169,000
11/29/2001	TCM	TYCOM LTD	504,775	18.10	303,100
11/30/2001	TCM	TYCOM LTD	500,999	18.37	345,700
12/3/2001	TCM	TYCOM LTD	500,999	18.09	685,900
12/4/2001	TCM	TYCOM LTD	500,999	18.23	338,900
12/5/2001	TCM	TYCOM LTD	500,999	18.68	785,000
12/6/2001	TCM	TYCOM LTD	500,999	18.60	381,200
12/7/2001	TCM	TYCOM LTD	500,999	18.34	361,900
12/10/2001	TCM	TYCOM LTD	500,999	17.84	151,100
12/11/2001	TCM	TYCOM LTD	500,999	17.69	147,600

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
12/12/2001	TCM	TYCOM LTD	500,999	17.47	377,000
12/13/2001	TCM	TYCOM LTD	500,999	17.08	302,500
12/14/2001	TCM	TYCOM LTD	500,999	17.21	438,400
12/17/2001	TCM	TYCOM LTD	500,999	17.40	223,100

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
7/27/2000	TCM	TYCOM LTD	511,130	36.00	37,465,296
7/28/2000	TCM	TYCOM LTD	511,130	35.25	8,426,699
7/31/2000	TCM	TYCOM LTD	511,130	34.06	6,654,898
8/1/2000	TCM	TYCOM LTD	511,130	35.56	2,580,500
8/2/2000	TCM	TYCOM LTD	511,130	36.56	2,000,500
8/3/2000	TCM	TYCOM LTD	511,130	34.88	1,488,099
8/4/2000	TCM	TYCOM LTD	511,130	36.94	1,471,199
8/7/2000	TCM	TYCOM LTD	511,130	37.25	1,137,199
8/8/2000	TCM	TYCOM LTD	511,130	36.44	718,100
8/9/2000	TCM	TYCOM LTD	511,130	36.44	1,252,399
8/10/2000	TCM	TYCOM LTD	511,130	35.50	1,364,699
8/11/2000	TCM	TYCOM LTD	511,130	35.19	730,600
8/14/2000	TCM	TYCOM LTD	511,130	34.25	1,121,199
8/15/2000	TCM	TYCOM LTD	511,130	34.25	1,489,500
8/16/2000	TCM	TYCOM LTD	511,130	36.69	1,805,599
8/17/2000	TCM	TYCOM LTD	511,130	36.81	1,086,899
8/18/2000	TCM	TYCOM LTD	511,130	37.75	1,341,000
8/21/2000	TCM	TYCOM LTD	511,130	39.63	3,673,699
8/22/2000	TCM	TYCOM LTD	511,130	39.75	2,453,199
8/23/2000	TCM	TYCOM LTD	511,130	40.38	1,099,799
8/24/2000	TCM	TYCOM LTD	511,130	41.13	825,000
8/25/2000	TCM	TYCOM LTD	511,130	41.31	629,100
8/28/2000	TCM	TYCOM LTD	511,130	40.38	836,000
8/29/2000	TCM	TYCOM LTD	511,130	39.38	672,300
8/30/2000	TCM	TYCOM LTD	511,130	40.38	499,800
8/31/2000	TCM	TYCOM LTD	511,130	41.63	1,127,899
9/1/2000	TCM	TYCOM LTD	511,130	45.44	2,059,099
9/5/2000	TCM	TYCOM LTD	511,130	44.81	1,627,699
9/6/2000	TCM	TYCOM LTD	511,130	42.88	1,120,699
9/7/2000	TCM	TYCOM LTD	511,130	42.44	1,022,200
9/8/2000	TCM	TYCOM LTD	511,130	42.44	1,832,599
9/11/2000	TCM	TYCOM LTD	511,130	42.38	2,605,699
9/12/2000	TCM	TYCOM LTD	511,130	42.69	1,619,500
9/13/2000	TCM	TYCOM LTD	511,130	42.50	571,100
9/14/2000	TCM	TYCOM LTD	511,130	41.06	268,200
9/15/2000	TCM	TYCOM LTD	511,130	39.25	1,021,500
9/18/2000	TCM	TYCOM LTD	511,130	36.94	834,600
9/19/2000	TCM	TYCOM LTD	511,130	38.75	1,342,399
9/20/2000	TCM	TYCOM LTD	511,130	38.50	1,062,000
9/21/2000	TCM	TYCOM LTD	511,130	37.75	582,900
9/22/2000	TCM	TYCOM LTD	511,130	35.56	2,164,199
9/25/2000	TCM	TYCOM LTD	511,130	37.50	1,551,399
9/26/2000	TCM	TYCOM LTD	511,130	39.13	830,800

Source: CRSP

TyCom Stock Data

SHARES OUTSTANDING					
DATE	TICKER	COMPANY NAME	(000's)	PRICE	VOLUME
9/27/2000	TCM	TYCOM LTD	511,130	37.50	766,800
9/28/2000	TCM	TYCOM LTD	511,130	38.63	650,000
9/29/2000	TCM	TYCOM LTD	520,300	38.38	360,800
10/2/2000	TCM	TYCOM LTD	520,300	37.38	321,900
10/3/2000	TCM	TYCOM LTD	520,300	36.63	291,500
10/4/2000	TCM	TYCOM LTD	520,300	35.25	1,007,600
10/5/2000	TCM	TYCOM LTD	520,300	36.38	1,368,099
10/6/2000	TCM	TYCOM LTD	520,300	34.81	655,800
10/9/2000	TCM	TYCOM LTD	520,300	34.94	789,300
10/10/2000	TCM	TYCOM LTD	520,300	33.50	398,500
10/11/2000	TCM	TYCOM LTD	520,300	33.00	611,100
10/12/2000	TCM	TYCOM LTD	520,300	31.50	876,400
10/13/2000	TCM	TYCOM LTD	520,300	32.38	1,812,799
10/16/2000	TCM	TYCOM LTD	520,300	30.00	545,200
10/17/2000	TCM	TYCOM LTD	520,300	26.88	5,300,099
10/18/2000	TCM	TYCOM LTD	520,300	28.25	1,778,099
10/19/2000	TCM	TYCOM LTD	520,300	31.94	899,000
10/20/2000	TCM	TYCOM LTD	520,300	32.00	1,224,500
10/23/2000	TCM	TYCOM LTD	520,300	32.56	633,200
10/24/2000	TCM	TYCOM LTD	520,300	35.25	1,179,799
10/25/2000	TCM	TYCOM LTD	520,300	33.88	640,200
10/26/2000	TCM	TYCOM LTD	520,300	32.00	593,700
10/27/2000	TCM	TYCOM LTD	520,300	31.38	401,300
10/30/2000	TCM	TYCOM LTD	520,300	31.06	507,700
10/31/2000	TCM	TYCOM LTD	520,300	33.50	954,800
11/1/2000	TCM	TYCOM LTD	520,300	33.19	377,300
11/2/2000	TCM	TYCOM LTD	520,300	33.75	456,600
11/3/2000	TCM	TYCOM LTD	520,300	35.00	553,000
11/6/2000	TCM	TYCOM LTD	520,300	33.38	395,300
11/7/2000	TCM	TYCOM LTD	520,300	33.25	439,700
11/8/2000	TCM	TYCOM LTD	520,300	30.81	398,700
11/9/2000	TCM	TYCOM LTD	520,300	30.00	704,000
11/10/2000	TCM	TYCOM LTD	520,300	28.13	593,400
11/13/2000	TCM	TYCOM LTD	520,300	28.44	816,300
11/14/2000	TCM	TYCOM LTD	520,300	31.63	822,300
11/15/2000	TCM	TYCOM LTD	520,300	30.38	434,500
11/16/2000	TCM	TYCOM LTD	520,300	28.69	360,200
11/17/2000	TCM	TYCOM LTD	520,300	27.00	1,156,000
11/20/2000	TCM	TYCOM LTD	520,300	25.75	508,900
11/21/2000	TCM	TYCOM LTD	520,300	26.44	945,200
11/22/2000	TCM	TYCOM LTD	520,300	26.06	395,700
11/24/2000	TCM	TYCOM LTD	520,300	26.44	201,000
11/27/2000	TCM	TYCOM LTD	520,300	26.63	330,300

Source: CRSP

TyCom Stock Data

SHARES OUTSTANDING					
DATE	TICKER	COMPANY NAME	(000's)	PRICE	VOLUME
11/28/2000	TCM	TYCOM LTD	520,300	25.00	1,907,099
11/29/2000	TCM	TYCOM LTD	520,300	23.13	1,333,000
11/30/2000	TCM	TYCOM LTD	520,300	20.88	2,319,899
12/1/2000	TCM	TYCOM LTD	520,300	22.75	1,126,100
12/4/2000	TCM	TYCOM LTD	520,300	22.50	1,127,200
12/5/2000	TCM	TYCOM LTD	520,300	24.50	1,333,700
12/6/2000	TCM	TYCOM LTD	520,300	22.75	614,600
12/7/2000	TCM	TYCOM LTD	520,300	21.13	606,400
12/8/2000	TCM	TYCOM LTD	520,300	23.63	425,700
12/11/2000	TCM	TYCOM LTD	520,300	25.63	1,530,300
12/12/2000	TCM	TYCOM LTD	520,300	25.75	715,200
12/13/2000	TCM	TYCOM LTD	520,300	24.75	196,200
12/14/2000	TCM	TYCOM LTD	520,300	23.69	508,500
12/15/2000	TCM	TYCOM LTD	520,300	21.50	910,100
12/18/2000	TCM	TYCOM LTD	520,300	21.94	284,100
12/19/2000	TCM	TYCOM LTD	520,300	22.75	451,800
12/20/2000	TCM	TYCOM LTD	520,300	22.13	625,000
12/21/2000	TCM	TYCOM LTD	520,300	20.19	1,194,900
12/22/2000	TCM	TYCOM LTD	520,300	20.75	825,300
12/26/2000	TCM	TYCOM LTD	520,300	19.69	452,700
12/27/2000	TCM	TYCOM LTD	520,300	19.88	929,200
12/28/2000	TCM	TYCOM LTD	520,300	22.81	987,100
12/29/2000	TCM	TYCOM LTD	520,390	22.38	780,200
1/2/2001	TCM	TYCOM LTD	520,390	21.06	579,100
1/3/2001	TCM	TYCOM LTD	520,390	23.56	911,200
1/4/2001	TCM	TYCOM LTD	520,390	26.00	1,386,700
1/5/2001	TCM	TYCOM LTD	520,390	26.31	482,800
1/8/2001	TCM	TYCOM LTD	520,390	26.19	1,350,700
1/9/2001	TCM	TYCOM LTD	520,390	27.00	797,300
1/10/2001	TCM	TYCOM LTD	520,390	27.50	493,100
1/11/2001	TCM	TYCOM LTD	520,390	28.19	900,000
1/12/2001	TCM	TYCOM LTD	520,390	28.81	646,200
1/16/2001	TCM	TYCOM LTD	520,390	27.75	951,500
1/17/2001	TCM	TYCOM LTD	520,390	26.00	1,365,600
1/18/2001	TCM	TYCOM LTD	520,390	24.50	2,269,900
1/19/2001	TCM	TYCOM LTD	520,390	24.88	2,369,000
1/22/2001	TCM	TYCOM LTD	520,390	23.88	569,200
1/23/2001	TCM	TYCOM LTD	520,390	25.25	772,700
1/24/2001	TCM	TYCOM LTD	520,390	27.69	763,200
1/25/2001	TCM	TYCOM LTD	520,390	27.88	837,500
1/26/2001	TCM	TYCOM LTD	520,390	28.06	570,300
1/29/2001	TCM	TYCOM LTD	520,390	28.15	406,300
1/30/2001	TCM	TYCOM LTD	520,390	30.10	471,200

Source: CRSP

TyCom Stock Data

SHARES OUTSTANDING					
DATE	TICKER	COMPANY NAME	(000's)	PRICE	VOLUME
1/31/2001	TCM	TYCOM LTD	520,390	28.30	517,800
2/1/2001	TCM	TYCOM LTD	520,390	29.09	556,300
2/2/2001	TCM	TYCOM LTD	520,390	29.15	382,400
2/5/2001	TCM	TYCOM LTD	520,390	30.10	272,700
2/6/2001	TCM	TYCOM LTD	520,390	31.34	605,800
2/7/2001	TCM	TYCOM LTD	520,390	29.65	663,100
2/8/2001	TCM	TYCOM LTD	520,390	28.71	411,300
2/9/2001	TCM	TYCOM LTD	520,390	26.65	579,900
2/12/2001	TCM	TYCOM LTD	520,390	28.26	453,900
2/13/2001	TCM	TYCOM LTD	520,390	29.75	492,600
2/14/2001	TCM	TYCOM LTD	520,390	28.71	556,800
2/15/2001	TCM	TYCOM LTD	520,390	27.70	288,900
2/16/2001	TCM	TYCOM LTD	520,390	26.72	487,900
2/20/2001	TCM	TYCOM LTD	520,390	25.09	747,000
2/21/2001	TCM	TYCOM LTD	520,390	22.40	1,769,900
2/22/2001	TCM	TYCOM LTD	520,390	20.70	1,280,900
2/23/2001	TCM	TYCOM LTD	520,390	19.93	1,068,200
2/26/2001	TCM	TYCOM LTD	520,390	20.99	1,227,300
2/27/2001	TCM	TYCOM LTD	520,390	20.00	1,104,400
2/28/2001	TCM	TYCOM LTD	520,390	19.75	1,702,700
3/1/2001	TCM	TYCOM LTD	520,390	18.40	1,013,100
3/2/2001	TCM	TYCOM LTD	520,390	18.04	4,842,200
3/5/2001	TCM	TYCOM LTD	520,390	19.23	1,324,300
3/6/2001	TCM	TYCOM LTD	520,390	19.97	464,400
3/7/2001	TCM	TYCOM LTD	520,390	18.25	921,700
3/8/2001	TCM	TYCOM LTD	520,390	18.40	587,400
3/9/2001	TCM	TYCOM LTD	520,390	17.00	1,737,200
3/12/2001	TCM	TYCOM LTD	520,390	16.00	2,798,800
3/13/2001	TCM	TYCOM LTD	520,390	15.60	2,912,100
3/14/2001	TCM	TYCOM LTD	520,390	13.50	2,719,400
3/15/2001	TCM	TYCOM LTD	520,390	13.20	1,681,100
3/16/2001	TCM	TYCOM LTD	520,390	13.85	1,503,000
3/19/2001	TCM	TYCOM LTD	520,390	13.99	881,300
3/20/2001	TCM	TYCOM LTD	520,390	13.69	814,900
3/21/2001	TCM	TYCOM LTD	520,390	11.84	1,869,100
3/22/2001	TCM	TYCOM LTD	520,390	10.48	3,113,100
3/23/2001	TCM	TYCOM LTD	520,390	11.56	4,273,000
3/26/2001	TCM	TYCOM LTD	520,390	12.98	3,021,700
3/27/2001	TCM	TYCOM LTD	520,390	13.10	2,093,600
3/28/2001	TCM	TYCOM LTD	520,390	13.24	4,459,800
3/29/2001	TCM	TYCOM LTD	520,390	13.65	5,096,200
3/30/2001	TCM	TYCOM LTD	520,390	13.15	2,412,800
4/2/2001	TCM	TYCOM LTD	520,390	12.56	625,800

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
4/3/2001	TCM	TYCOM LTD	520,390	10.95	3,098,900
4/4/2001	TCM	TYCOM LTD	520,390	9.99	1,299,400
4/5/2001	TCM	TYCOM LTD	520,390	11.45	2,711,300
4/6/2001	TCM	TYCOM LTD	520,390	11.59	2,174,700
4/9/2001	TCM	TYCOM LTD	520,390	11.39	467,400
4/10/2001	TCM	TYCOM LTD	520,390	12.95	2,342,000
4/11/2001	TCM	TYCOM LTD	520,390	14.09	2,187,200
4/12/2001	TCM	TYCOM LTD	520,390	13.84	1,262,900
4/16/2001	TCM	TYCOM LTD	520,390	13.64	550,000
4/17/2001	TCM	TYCOM LTD	520,390	14.53	1,543,600
4/18/2001	TCM	TYCOM LTD	520,390	18.25	3,049,500
4/19/2001	TCM	TYCOM LTD	520,390	16.40	3,156,200
4/20/2001	TCM	TYCOM LTD	520,390	16.03	1,744,300
4/23/2001	TCM	TYCOM LTD	520,390	15.94	399,600
4/24/2001	TCM	TYCOM LTD	520,390	15.25	506,800
4/25/2001	TCM	TYCOM LTD	520,390	14.99	1,184,800
4/26/2001	TCM	TYCOM LTD	520,390	14.38	607,800
4/27/2001	TCM	TYCOM LTD	520,390	13.51	1,097,100
4/30/2001	TCM	TYCOM LTD	520,390	14.49	922,600
5/1/2001	TCM	TYCOM LTD	520,390	15.33	725,900
5/2/2001	TCM	TYCOM LTD	520,390	16.05	681,200
5/3/2001	TCM	TYCOM LTD	520,390	15.70	390,900
5/4/2001	TCM	TYCOM LTD	520,390	16.06	306,100
5/7/2001	TCM	TYCOM LTD	520,390	16.26	500,000
5/8/2001	TCM	TYCOM LTD	520,390	16.15	552,800
5/9/2001	TCM	TYCOM LTD	520,390	16.20	1,009,200
5/10/2001	TCM	TYCOM LTD	520,390	16.75	741,600
5/11/2001	TCM	TYCOM LTD	520,390	16.34	478,500
5/14/2001	TCM	TYCOM LTD	520,390	15.81	322,000
5/15/2001	TCM	TYCOM LTD	520,390	16.13	1,168,900
5/16/2001	TCM	TYCOM LTD	520,390	16.80	1,068,800
5/17/2001	TCM	TYCOM LTD	520,390	17.28	1,437,200
5/18/2001	TCM	TYCOM LTD	520,390	17.55	266,700
5/21/2001	TCM	TYCOM LTD	520,390	18.35	673,100
5/22/2001	TCM	TYCOM LTD	520,390	18.90	1,444,800
5/23/2001	TCM	TYCOM LTD	520,390	17.50	657,700
5/24/2001	TCM	TYCOM LTD	520,390	17.90	687,400
5/25/2001	TCM	TYCOM LTD	520,390	17.95	152,000
5/29/2001	TCM	TYCOM LTD	520,390	17.00	291,200
5/30/2001	TCM	TYCOM LTD	520,390	16.30	762,100
5/31/2001	TCM	TYCOM LTD	506,160	17.80	955,700
6/1/2001	TCM	TYCOM LTD	506,160	18.05	800,100
6/4/2001	TCM	TYCOM LTD	506,160	18.49	451,000

Source: CRSP

TyCom Stock Data

SHARES OUTSTANDING					
DATE	TICKER	COMPANY NAME	(000's)	PRICE	VOLUME
6/5/2001	TCM	TYCOM LTD	506,160	19.50	658,200
6/6/2001	TCM	TYCOM LTD	506,160	19.04	740,600
6/7/2001	TCM	TYCOM LTD	506,160	19.12	388,100
6/8/2001	TCM	TYCOM LTD	506,160	18.75	421,100
6/11/2001	TCM	TYCOM LTD	506,160	18.18	260,800
6/12/2001	TCM	TYCOM LTD	506,160	18.03	383,900
6/13/2001	TCM	TYCOM LTD	506,160	17.87	181,800
6/14/2001	TCM	TYCOM LTD	506,160	16.90	528,100
6/15/2001	TCM	TYCOM LTD	506,160	15.00	946,200
6/18/2001	TCM	TYCOM LTD	506,160	13.85	1,272,700
6/19/2001	TCM	TYCOM LTD	506,160	14.32	1,975,200
6/20/2001	TCM	TYCOM LTD	506,160	14.57	724,900
6/21/2001	TCM	TYCOM LTD	506,160	15.46	985,500
6/22/2001	TCM	TYCOM LTD	506,160	16.00	627,400
6/25/2001	TCM	TYCOM LTD	506,160	16.20	484,200
6/26/2001	TCM	TYCOM LTD	506,160	16.00	365,700
6/27/2001	TCM	TYCOM LTD	506,160	15.86	393,300
6/28/2001	TCM	TYCOM LTD	506,160	16.84	1,317,100
6/29/2001	TCM	TYCOM LTD	506,160	17.20	633,700
7/2/2001	TCM	TYCOM LTD	506,160	16.40	1,227,200
7/3/2001	TCM	TYCOM LTD	506,160	16.95	215,200
7/5/2001	TCM	TYCOM LTD	506,160	16.34	304,700
7/6/2001	TCM	TYCOM LTD	506,160	14.73	699,200
7/9/2001	TCM	TYCOM LTD	506,160	15.20	444,400
7/10/2001	TCM	TYCOM LTD	506,160	15.27	927,000
7/11/2001	TCM	TYCOM LTD	506,160	13.65	1,205,100
7/12/2001	TCM	TYCOM LTD	506,160	13.99	895,700
7/13/2001	TCM	TYCOM LTD	506,160	14.40	940,800
7/16/2001	TCM	TYCOM LTD	506,160	13.94	858,200
7/17/2001	TCM	TYCOM LTD	506,160	14.55	1,513,300
7/18/2001	TCM	TYCOM LTD	506,160	15.10	1,951,800
7/19/2001	TCM	TYCOM LTD	506,160	14.80	735,400
7/20/2001	TCM	TYCOM LTD	506,160	14.63	728,600
7/23/2001	TCM	TYCOM LTD	506,160	14.59	358,900
7/24/2001	TCM	TYCOM LTD	506,160	14.71	524,800
7/25/2001	TCM	TYCOM LTD	506,160	14.73	479,900
7/26/2001	TCM	TYCOM LTD	506,160	15.20	505,100
7/27/2001	TCM	TYCOM LTD	506,160	14.90	1,177,600
7/30/2001	TCM	TYCOM LTD	506,160	14.70	215,600
7/31/2001	TCM	TYCOM LTD	506,160	14.60	368,700
8/1/2001	TCM	TYCOM LTD	506,160	15.15	771,500
8/2/2001	TCM	TYCOM LTD	506,160	14.54	930,600
8/3/2001	TCM	TYCOM LTD	506,160	13.63	1,341,500

Source: CRSP

TyCom Stock Data

SHARES OUTSTANDING					
DATE	TICKER	COMPANY NAME	(000's)	PRICE	VOLUME
8/6/2001	TCM	TYCOM LTD	506,160	12.16	1,107,700
8/7/2001	TCM	TYCOM LTD	506,160	11.15	2,284,600
8/8/2001	TCM	TYCOM LTD	506,160	11.40	2,521,200
8/9/2001	TCM	TYCOM LTD	506,160	12.00	1,745,000
8/10/2001	TCM	TYCOM LTD	506,160	11.87	1,293,300
8/13/2001	TCM	TYCOM LTD	506,160	12.25	2,153,100
8/14/2001	TCM	TYCOM LTD	506,160	12.70	1,045,100
8/15/2001	TCM	TYCOM LTD	506,160	12.60	845,500
8/16/2001	TCM	TYCOM LTD	506,160	12.26	2,403,100
8/17/2001	TCM	TYCOM LTD	506,160	12.08	691,100
8/20/2001	TCM	TYCOM LTD	506,160	11.80	339,500
8/21/2001	TCM	TYCOM LTD	506,160	11.71	657,600
8/22/2001	TCM	TYCOM LTD	506,160	12.64	1,147,200
8/23/2001	TCM	TYCOM LTD	506,160	13.00	628,400
8/24/2001	TCM	TYCOM LTD	506,160	13.66	1,428,500
8/27/2001	TCM	TYCOM LTD	506,160	13.33	1,650,400
8/28/2001	TCM	TYCOM LTD	506,160	12.86	264,700
8/29/2001	TCM	TYCOM LTD	506,160	12.62	360,800
8/30/2001	TCM	TYCOM LTD	506,160	11.90	1,000,400
8/31/2001	TCM	TYCOM LTD	504,774	11.40	767,900
9/4/2001	TCM	TYCOM LTD	504,774	10.10	1,216,600
9/5/2001	TCM	TYCOM LTD	504,774	10.74	4,096,200
9/6/2001	TCM	TYCOM LTD	504,774	9.30	2,211,100
9/7/2001	TCM	TYCOM LTD	504,774	9.03	970,700
9/10/2001	TCM	TYCOM LTD	504,774	9.06	668,900
9/17/2001	TCM	TYCOM LTD	504,774	8.35	1,049,700
9/18/2001	TCM	TYCOM LTD	504,774	8.93	1,497,500
9/19/2001	TCM	TYCOM LTD	504,774	9.30	1,033,100
9/20/2001	TCM	TYCOM LTD	504,774	8.85	862,200
9/21/2001	TCM	TYCOM LTD	504,774	8.25	1,037,200
9/24/2001	TCM	TYCOM LTD	504,774	8.80	671,700
9/25/2001	TCM	TYCOM LTD	504,774	8.19	561,700
9/26/2001	TCM	TYCOM LTD	504,774	7.81	349,300
9/27/2001	TCM	TYCOM LTD	504,774	7.41	1,081,900
9/28/2001	TCM	TYCOM LTD	504,774	7.85	878,500
10/1/2001	TCM	TYCOM LTD	504,774	7.60	1,181,200
10/2/2001	TCM	TYCOM LTD	504,774	7.75	1,372,900
10/3/2001	TCM	TYCOM LTD	504,774	9.46	1,720,300
10/4/2001	TCM	TYCOM LTD	504,774	14.43	14,473,700
10/5/2001	TCM	TYCOM LTD	504,774	14.55	2,852,800
10/8/2001	TCM	TYCOM LTD	504,774	14.20	2,058,500
10/9/2001	TCM	TYCOM LTD	504,774	14.23	698,500
10/10/2001	TCM	TYCOM LTD	504,774	14.30	920,000

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
10/11/2001	TCM	TYCOM LTD	504,774	14.55	2,402,100
10/12/2001	TCM	TYCOM LTD	504,774	14.35	1,270,600
10/15/2001	TCM	TYCOM LTD	504,774	14.67	1,028,900
10/16/2001	TCM	TYCOM LTD	504,774	14.70	914,200
10/17/2001	TCM	TYCOM LTD	504,774	14.52	343,500
10/18/2001	TCM	TYCOM LTD	504,774	14.76	3,089,900
10/19/2001	TCM	TYCOM LTD	504,774	15.10	2,450,600
10/22/2001	TCM	TYCOM LTD	504,774	15.26	520,200
10/23/2001	TCM	TYCOM LTD	504,774	15.12	728,100
10/24/2001	TCM	TYCOM LTD	504,774	15.45	371,200
10/25/2001	TCM	TYCOM LTD	504,774	15.45	1,436,600
10/26/2001	TCM	TYCOM LTD	504,774	15.66	1,392,400
10/29/2001	TCM	TYCOM LTD	504,774	15.41	110,000
10/30/2001	TCM	TYCOM LTD	504,774	15.10	522,400
10/31/2001	TCM	TYCOM LTD	504,775	15.32	221,100
11/1/2001	TCM	TYCOM LTD	504,775	15.60	233,600
11/2/2001	TCM	TYCOM LTD	504,775	16.05	304,700
11/5/2001	TCM	TYCOM LTD	504,775	16.20	259,000
11/6/2001	TCM	TYCOM LTD	504,775	16.26	387,700
11/7/2001	TCM	TYCOM LTD	504,775	16.52	440,200
11/8/2001	TCM	TYCOM LTD	504,775	16.83	299,100
11/9/2001	TCM	TYCOM LTD	504,775	16.96	249,200
11/12/2001	TCM	TYCOM LTD	504,775	16.99	91,500
11/13/2001	TCM	TYCOM LTD	504,775	17.30	475,900
11/14/2001	TCM	TYCOM LTD	504,775	17.60	196,000
11/15/2001	TCM	TYCOM LTD	504,775	18.05	196,100
11/16/2001	TCM	TYCOM LTD	504,775	17.85	123,200
11/19/2001	TCM	TYCOM LTD	504,775	18.07	149,100
11/20/2001	TCM	TYCOM LTD	504,775	17.80	386,200
11/21/2001	TCM	TYCOM LTD	504,775	17.93	107,100
11/23/2001	TCM	TYCOM LTD	504,775	18.06	38,400
11/26/2001	TCM	TYCOM LTD	504,775	18.36	212,800
11/27/2001	TCM	TYCOM LTD	504,775	18.61	126,700
11/28/2001	TCM	TYCOM LTD	504,775	18.21	169,000
11/29/2001	TCM	TYCOM LTD	504,775	18.10	303,100
11/30/2001	TCM	TYCOM LTD	500,999	18.37	345,700
12/3/2001	TCM	TYCOM LTD	500,999	18.09	685,900
12/4/2001	TCM	TYCOM LTD	500,999	18.23	338,900
12/5/2001	TCM	TYCOM LTD	500,999	18.68	785,000
12/6/2001	TCM	TYCOM LTD	500,999	18.60	381,200
12/7/2001	TCM	TYCOM LTD	500,999	18.34	361,900
12/10/2001	TCM	TYCOM LTD	500,999	17.84	151,100
12/11/2001	TCM	TYCOM LTD	500,999	17.69	147,600

Source: CRSP

TyCom Stock Data

DATE	TICKER	COMPANY NAME	SHARES OUTSTANDING	PRICE	VOLUME
			(000's)		
12/12/2001	TCM	TYCOM LTD	500,999	17.47	377,000
12/13/2001	TCM	TYCOM LTD	500,999	17.08	302,500
12/14/2001	TCM	TYCOM LTD	500,999	17.21	438,400
12/17/2001	TCM	TYCOM LTD	500,999	17.40	223,100

Source: CRSP

TyCom Industry Stock Data

<u>DATE</u>	<u>SP500</u>	<u>GBLXQ</u>	<u>TSIXQ</u>	<u>LVL</u>	<u>WCGRQ</u>	<u>Q</u>	<u>MFNXQ</u>
8/1/2000	1,438.10	25.313	15.125	66.500	29.000	48.498	32.938
8/2/2000	1,438.70	27.875	15.000	67.750	29.250	48.748	33.125
8/3/2000	1,452.56	30.125	15.313	67.375	27.813	46.812	35.813
8/4/2000	1,462.93	30.125	15.625	67.625	28.313	49.309	37.063
8/7/2000	1,479.32	31.875	15.500	65.750	29.375	51.494	39.375
8/8/2000	1,482.80	30.500	16.000	63.750	30.000	51.993	37.000
8/9/2000	1,472.87	29.906	16.000	63.500	30.125	51.181	37.313
8/10/2000	1,460.25	29.188	16.000	62.188	29.875	48.685	35.188
8/11/2000	1,471.84	29.266	15.875	59.750	29.125	47.062	36.750
8/14/2000	1,491.56	30.500	15.875	61.938	29.000	49.746	37.625
8/15/2000	1,484.43	30.500	15.750	61.813	28.938	49.372	36.063
8/16/2000	1,479.85	29.813	16.063	59.625	28.500	48.498	36.250
8/17/2000	1,496.07	32.500	16.438	59.500	28.500	47.999	36.250
8/18/2000	1,491.72	31.688	16.313	60.000	27.313	46.251	34.250
8/21/2000	1,499.48	32.000	16.250	64.500	27.750	46.126	34.188
8/22/2000	1,498.13	32.313	16.250	67.313	26.875	44.565	33.500
8/23/2000	1,505.97	33.063	16.563	69.750	26.875	46.001	34.375
8/24/2000	1,508.31	32.125	16.500	73.688	26.250	47.561	35.813
8/25/2000	1,506.45	31.375	16.500	78.375	27.625	50.246	36.688
8/28/2000	1,514.09	31.625	16.563	82.688	29.188	50.870	37.750
8/29/2000	1,509.84	29.547	16.875	81.063	28.000	50.620	35.975
8/30/2000	1,502.59	29.750	17.000	83.750	28.188	51.119	37.188
8/31/2000	1,517.68	30.063	17.813	87.234	29.375	51.556	39.938
9/1/2000	1,520.77	35.125	20.063	86.063	30.000	51.805	38.375
9/5/2000	1,507.08	35.125	21.625	81.250	29.063	51.369	37.375
9/6/2000	1,492.25	33.813	23.063	78.875	28.938	51.431	37.063
9/7/2000	1,502.51	34.500	22.813	79.938	28.375	48.685	35.000
9/8/2000	1,494.50	33.000	21.688	79.313	27.000	48.685	33.813
9/11/2000	1,489.26	31.750	21.875	77.750	26.250	48.185	31.750
9/12/2000	1,481.99	31.313	20.813	74.250	26.250	47.686	31.000
9/13/2000	1,481.91	31.250	20.750	77.875	24.750	47.561	31.563
9/14/2000	1,480.87	30.750	20.938	78.250	25.313	46.373	30.938
9/15/2000	1,465.81	29.797	20.500	74.563	24.688	47.374	28.625
9/18/2000	1,444.51	28.375	19.875	69.875	23.250	45.003	26.875
9/19/2000	1,459.90	30.016	20.500	74.000	22.875	46.937	27.813
9/20/2000	1,451.34	29.438	20.813	71.625	20.875	46.625	26.313
9/21/2000	1,449.05	28.000	19.750	71.750	19.563	46.063	25.625
9/22/2000	1,448.72	28.250	19.313	72.875	19.250	47.999	25.000
9/25/2000	1,439.03	30.000	19.375	73.063	19.000	48.623	23.813
9/26/2000	1,427.21	28.000	19.188	76.438	18.375	48.810	22.000
9/27/2000	1,426.57	29.875	18.500	75.688	18.625	47.374	23.875
9/28/2000	1,458.29	31.875	18.375	76.609	20.375	47.936	24.750
9/29/2000	1,436.51	31.000	19.625	77.125	20.000	47.999	24.313
10/2/2000	1,436.23	29.063	20.000	72.375	20.000	46.625	22.438
10/3/2000	1,426.46	28.000	19.500	68.875	20.250	46.563	20.500
10/4/2000	1,434.32	27.797	19.813	75.234	19.250	49.496	22.750
10/5/2000	1,436.28	27.500	19.375	73.063	19.250	50.870	23.875
10/6/2000	1,408.99	27.000	18.766	68.000	18.875	51.369	22.813
10/9/2000	1,402.03	26.000	18.250	68.063	18.813	50.370	21.813
10/10/2000	1,387.02	23.875	18.500	67.875	18.438	49.122	19.625

Source: Bloomberg.

TyCom Industry Stock Data

<u>DATE</u>	<u>SP500</u>	<u>GBLXQ</u>	<u>TSIXQ</u>	<u>LVL</u>	<u>WCGRO</u>	<u>Q</u>	<u>MFNXQ</u>
10/11/2000	1,364.59	21.438	18.313	60.250	17.313	47.125	18.438
10/12/2000	1,329.78	21.813	17.375	54.875	16.875	45.189	17.000
10/13/2000	1,374.17	25.750	16.563	60.000	17.375	46.563	19.875
10/16/2000	1,374.62	24.625	15.563	58.375	16.375	47.874	18.688
10/17/2000	1,349.97	23.125	14.750	56.125	15.625	47.312	17.000
10/18/2000	1,342.13	22.063	14.000	47.000	15.000	43.816	15.313
10/19/2000	1,388.76	24.000	14.563	48.500	16.000	44.878	17.938
10/20/2000	1,396.93	22.938	15.375	49.563	16.250	45.502	17.688
10/23/2000	1,395.78	22.938	15.625	49.250	16.063	45.314	17.359
10/24/2000	1,398.13	24.000	16.875	50.500	17.188	47.624	18.938
10/25/2000	1,364.90	22.125	15.938	50.375	15.500	48.685	18.438
10/26/2000	1,364.44	23.000	15.938	46.750	15.250	48.810	16.500
10/27/2000	1,379.58	23.250	16.750	44.375	16.188	49.933	17.563
10/30/2000	1,398.66	23.313	15.750	43.188	16.938	49.933	17.188
10/31/2000	1,429.40	23.625	18.125	47.688	18.313	48.560	19.000
11/1/2000	1,421.22	22.875	17.813	42.563	17.313	45.627	21.375
11/2/2000	1,428.32	23.625	18.563	41.688	17.438	46.251	21.563
11/3/2000	1,426.69	21.438	18.750	39.813	17.250	47.187	21.625
11/6/2000	1,432.19	21.125	16.078	35.000	17.125	45.689	22.000
11/7/2000	1,431.87	21.188	15.500	38.000	18.375	45.439	21.813
11/8/2000	1,409.28	20.063	15.750	39.563	18.500	45.814	20.875
11/9/2000	1,400.14	17.563	16.125	38.375	17.438	44.129	20.000
11/10/2000	1,365.98	17.938	16.063	36.063	15.250	39.697	18.250
11/13/2000	1,351.26	17.625	14.250	30.250	14.625	41.507	16.688
11/14/2000	1,382.95	18.500	13.938	34.500	16.813	42.131	20.313
11/15/2000	1,389.81	16.500	13.438	35.625	15.688	42.131	20.063
11/16/2000	1,372.32	15.500	13.438	33.500	15.875	42.193	18.875
11/17/2000	1,367.72	16.250	13.063	32.875	15.875	41.819	17.438
11/20/2000	1,342.62	15.000	13.063	33.500	15.250	40.071	16.563
11/21/2000	1,347.35	16.375	13.500	32.750	15.313	41.008	16.125
11/22/2000	1,322.36	15.063	13.000	30.750	14.063	38.948	14.063
11/24/2000	1,341.77	16.125	13.313	33.500	13.875	39.760	14.250
11/27/2000	1,348.97	15.375	13.500	35.000	14.000	40.633	13.188
11/28/2000	1,336.09	14.063	13.000	31.219	13.875	41.070	11.844
11/29/2000	1,341.91	12.688	11.813	30.313	12.375	39.197	11.188
11/30/2000	1,314.95	12.375	10.375	26.875	10.875	37.699	11.688
12/1/2000	1,315.23	12.938	11.063	28.313	11.563	37.388	13.750
12/4/2000	1,324.97	12.625	11.250	27.250	11.813	38.761	11.375
12/5/2000	1,376.54	14.188	12.125	30.313	12.688	39.760	11.750
12/6/2000	1,351.46	14.438	11.625	31.063	12.500	40.009	11.688
12/7/2000	1,343.55	13.500	11.188	30.000	11.938	39.197	11.063
12/8/2000	1,369.89	15.688	11.875	34.938	12.125	39.635	12.438
12/11/2000	1,380.20	18.625	13.125	39.813	13.313	41.819	14.438
12/12/2000	1,371.18	17.938	13.063	38.313	13.563	42.443	13.750
12/13/2000	1,359.99	18.688	12.750	41.000	14.125	42.880	15.125
12/14/2000	1,340.93	17.438	11.500	36.250	12.938	41.444	13.438
12/15/2000	1,312.15	16.938	12.516	34.750	12.250	38.886	12.188
12/18/2000	1,322.74	16.500	12.938	36.000	12.063	39.946	13.438
12/19/2000	1,305.60	15.563	12.688	33.250	11.625	37.575	11.938
12/20/2000	1,264.74	13.063	12.750	29.000	11.875	32.332	9.656

Source: Bloomberg.

TyCom Industry Stock Data

<u>DATE</u>	<u>SP500</u>	<u>GBLXQ</u>	<u>TSIXQ</u>	<u>LVI</u>	<u>WCGRQ</u>	<u>Q</u>	<u>MFNXQ</u>
12/21/2000	1,274.86	12.813	12.938	28.875	11.500	37.450	9.844
12/22/2000	1,305.97	14.125	12.500	32.813	12.063	38.074	10.250
12/26/2000	1,315.19	13.250	11.875	31.000	12.375	38.012	10.063
12/27/2000	1,328.92	13.000	12.188	32.813	11.625	39.197	10.000
12/28/2000	1,334.22	15.375	12.563	34.125	11.625	40.259	10.625
12/29/2000	1,320.28	14.313	12.750	32.813	11.750	40.820	10.125
1/2/2001	1,283.27	14.106	11.938	30.813	11.500	39.635	10.000
1/3/2001	1,347.56	17.688	13.000	38.063	14.000	43.442	12.938
1/4/2001	1,333.34	21.188	13.563	35.875	15.625	45.938	16.313
1/5/2001	1,298.35	18.938	12.938	33.938	15.750	43.505	13.125
1/8/2001	1,295.86	19.500	12.500	34.375	15.625	41.944	15.000
1/9/2001	1,300.80	21.375	12.938	38.063	15.375	44.815	14.875
1/10/2001	1,313.27	22.250	14.000	44.625	17.250	45.627	15.438
1/11/2001	1,326.82	23.438	15.250	47.500	17.625	47.136	17.500
1/12/2001	1,318.32	21.688	14.813	45.125	19.500	46.563	18.688
1/16/2001	1,326.65	21.625	14.625	46.563	19.875	46.937	17.938
1/17/2001	1,329.47	22.625	14.375	47.000	19.625	45.377	16.250
1/18/2001	1,347.97	24.938	15.250	45.297	20.313	45.689	18.188
1/19/2001	1,342.55	24.875	15.313	43.563	19.875	46.438	19.063
1/22/2001	1,342.90	23.375	15.000	44.500	18.625	43.255	17.313
1/23/2001	1,360.40	24.125	15.563	46.375	18.000	44.565	17.813
1/24/2001	1,364.30	23.563	15.000	49.688	17.063	47.000	17.438
1/25/2001	1,357.51	22.875	14.688	46.250	17.675	44.316	15.875
1/26/2001	1,354.95	21.588	14.375	46.375	17.563	41.819	16.063
1/29/2001	1,364.17	22.670	14.375	40.063	18.050	43.502	16.875
1/30/2001	1,373.73	22.400	14.188	41.000	18.700	42.743	16.938
1/31/2001	1,366.01	22.020	14.500	40.688	18.010	42.064	15.938
2/1/2001	1,373.47	23.750	14.000	39.375	17.920	41.744	15.750
2/2/2001	1,349.47	20.650	13.688	37.750	18.050	39.707	14.063
2/5/2001	1,354.31	20.680	13.250	37.625	17.980	40.845	13.938
2/6/2001	1,352.26	20.500	13.250	38.188	17.300	41.125	13.875
2/7/2001	1,340.89	20.980	13.000	37.250	16.490	40.386	13.000
2/8/2001	1,332.53	21.050	12.875	36.563	16.960	40.945	12.063
2/9/2001	1,314.76	19.480	12.188	34.063	17.020	40.376	11.250
2/12/2001	1,330.31	19.680	11.875	33.125	17.100	40.845	11.688
2/13/2001	1,318.80	19.400	12.063	31.438	16.400	41.634	10.813
2/14/2001	1,315.92	18.060	12.000	31.000	15.450	39.028	12.313
2/15/2001	1,326.61	18.900	12.219	33.875	15.200	39.647	12.188
2/16/2001	1,301.53	17.400	11.000	30.750	14.400	37.050	11.313
2/20/2001	1,278.94	16.500	10.500	28.188	13.350	36.801	11.000
2/21/2001	1,255.27	15.300	9.938	28.063	12.400	37.450	10.563
2/22/2001	1,252.82	15.720	9.938	27.438	13.050	36.441	10.375
2/23/2001	1,245.86	16.280	9.813	28.625	12.650	35.852	10.813
2/26/2001	1,267.65	17.400	10.000	28.750	13.420	38.219	11.313
2/27/2001	1,257.94	17.100	8.500	26.563	12.640	37.400	10.063
2/28/2001	1,239.94	16.230	7.938	25.313	12.460	36.920	9.500
3/1/2001	1,241.23	16.190	7.703	24.938	12.050	34.813	8.938
3/2/2001	1,234.18	16.000	7.000	23.250	12.750	34.683	9.219
3/5/2001	1,241.41	16.100	6.563	23.875	12.910	34.254	9.031
3/6/2001	1,253.80	17.230	5.906	23.875	13.000	34.893	8.906

Source: Bloomberg.

TyCom Industry Stock Data

<u>DATE</u>	<u>SP500</u>	<u>GBLXQ</u>	<u>TSIXQ</u>	<u>LVLIT</u>	<u>WCGRQ</u>	<u>Q</u>	<u>MFNXQ</u>
3/7/2001	1,261.89	17.150	5.000	24.813	13.500	34.474	9.531
3/8/2001	1,264.74	17.730	5.406	22.668	12.900	35.243	9.750
3/9/2001	1,233.42	16.300	5.063	21.875	13.810	33.755	9.031
3/12/2001	1,180.16	14.300	5.000	19.625	12.800	33.205	7.063
3/13/2001	1,197.66	15.230	5.406	18.938	12.200	34.733	8.219
3/14/2001	1,166.71	14.440	5.188	16.188	11.250	35.393	7.531
3/15/2001	1,173.56	15.300	4.375	17.563	11.310	37.869	7.219
3/16/2001	1,150.53	14.310	4.219	17.188	10.850	36.791	6.844
3/19/2001	1,170.81	15.070	3.969	18.563	10.330	36.950	7.188
3/20/2001	1,142.62	13.350	3.750	17.875	10.730	36.331	6.125
3/21/2001	1,122.14	12.810	3.219	15.500	9.900	34.184	5.094
3/22/2001	1,117.58	12.460	3.083	15.563	9.400	33.954	4.969
3/23/2001	1,139.83	14.500	3.083	16.063	9.800	35.203	5.719
3/26/2001	1,152.69	14.750	3.531	16.188	9.750	36.301	5.840
3/27/2001	1,182.17	15.260	4.188	18.000	10.200	37.140	6.080
3/28/2001	1,153.29	13.980	4.000	16.688	10.020	34.833	5.490
3/29/2001	1,147.95	13.950	3.313	17.125	9.600	35.113	5.270
3/30/2001	1,160.33	13.490	3.563	17.375	9.000	35.003	5.480
4/2/2001	1,145.87	12.020	3.500	15.063	8.000	35.652	4.960
4/3/2001	1,106.46	10.100	3.516	12.063	7.400	32.676	3.380
4/4/2001	1,103.25	9.650	3.063	9.856	6.910	30.070	3.560
4/5/2001	1,151.44	10.900	3.453	11.938	7.540	32.806	4.530
4/6/2001	1,128.43	9.250	3.250	10.750	6.950	31.358	3.760
4/9/2001	1,137.59	8.880	3.000	12.000	7.400	32.147	4.040
4/10/2001	1,168.38	10.150	3.160	13.450	7.400	34.753	4.660
4/11/2001	1,165.89	10.700	3.230	13.940	7.650	35.652	4.640
4/12/2001	1,183.50	10.650	3.170	15.160	7.660	35.652	4.600
4/16/2001	1,179.68	9.850	3.020	14.690	7.300	35.652	4.260
4/17/2001	1,191.81	10.390	2.620	14.900	6.010	36.191	4.120
4/18/2001	1,238.16	11.650	2.730	13.060	5.850	37.460	4.400
4/19/2001	1,253.70	12.300	2.600	14.430	5.260	36.851	4.690
4/20/2001	1,242.98	11.670	2.570	15.270	5.370	37.350	5.250
4/23/2001	1,224.36	11.150	2.110	14.150	4.200	37.070	4.970
4/24/2001	1,209.47	10.770	1.580	13.950	4.250	37.250	5.000
4/25/2001	1,228.75	11.050	1.380	13.060	4.220	38.848	5.170
4/26/2001	1,234.52	11.390	1.770	13.040	4.510	39.197	5.100
4/27/2001	1,253.05	11.850	2.040	13.150	4.780	39.747	4.750
4/30/2001	1,249.46	12.530	1.720	14.230	4.520	40.845	5.090
5/1/2001	1,266.44	13.150	1.750	15.850	4.550	40.755	5.210
5/2/2001	1,267.43	13.600	1.630	18.440	5.500	39.387	6.480
5/3/2001	1,248.58	13.720	1.530	16.560	5.820	38.398	6.130
5/4/2001	1,266.61	14.290	1.500	16.710	5.990	37.490	6.250
5/7/2001	1,263.51	14.400	1.480	16.200	5.760	38.588	5.820
5/8/2001	1,261.20	13.850	1.410	15.800	5.560	37.500	6.000
5/9/2001	1,255.54	13.800	1.743	15.490	5.350	37.949	5.730
5/10/2001	1,255.18	14.100	1.710	15.960	5.110	37.909	5.830
5/11/2001	1,245.67	13.350	1.700	14.320	4.980	37.370	5.360
5/14/2001	1,248.92	12.800	1.620	13.960	4.700	37.879	5.310
5/15/2001	1,249.44	12.860	1.520	13.540	4.410	37.600	5.140
5/16/2001	1,284.99	14.570	1.340	13.750	4.570	36.950	5.410

Source: Bloomberg.

TyCom Industry Stock Data

<u>DATE</u>	<u>SP500</u>	<u>GBLXQ</u>	<u>FSIXQ</u>	<u>LVL</u>	<u>WCGRQ</u>	<u>Q</u>	<u>MFNXQ</u>
5/17/2001	1,288.49	14.600	1.360	14.230	4.600	37.769	5.810
5/18/2001	1,291.96	15.600	1.200	13.750	4.710	38.548	5.470
5/21/2001	1,312.83	15.800	1.110	14.050	4.710	38.618	5.430
5/22/2001	1,309.38	15.720	1.180	14.090	5.000	38.478	5.630
5/23/2001	1,289.05	14.510	1.180	13.010	5.260	37.550	5.020
5/24/2001	1,293.17	14.340	1.180	13.900	5.280	37.020	5.180
5/25/2001	1,277.89	14.220	1.330	13.390	5.050	37.699	5.000
5/29/2001	1,267.93	13.160	1.430	12.340	4.750	37.240	4.630
5/30/2001	1,248.08	12.250	1.300	11.690	4.380	30.290	4.410
5/31/2001	1,255.82	12.700	1.280	11.200	4.200	36.740	4.020
6/1/2001	1,260.67	12.400	1.250	11.280	4.310	36.910	4.040
6/4/2001	1,267.11	12.080	1.170	10.150	3.850	36.150	3.880
6/5/2001	1,283.57	12.940	1.180	10.880	4.040	36.230	4.650
6/6/2001	1,270.03	13.300	1.140	10.760	4.040	36.210	5.170
6/7/2001	1,276.98	13.050	0.990	10.460	3.890	35.000	4.930
6/8/2001	1,264.96	13.000	0.640	9.290	3.090	34.260	4.600
6/11/2001	1,254.39	12.160	0.660	8.810	3.680	34.250	4.210
6/12/2001	1,255.85	11.710	0.450	8.060	3.400	34.360	4.160
6/13/2001	1,241.60	11.100	0.350	8.450	3.370	34.400	3.910
6/14/2001	1,213.87	10.500	0.430	7.960	3.000	34.100	3.550
6/15/2001	1,214.36	8.660	0.300	7.820	3.140	33.000	3.490
6/18/2001	1,208.43	7.680	0.320	5.970	2.750	29.820	2.100
6/19/2001	1,212.58	6.850	0.250	5.190	2.670	31.270	1.590
6/20/2001	1,223.14	6.920	0.219	4.530	2.560	30.020	1.720
6/21/2001	1,237.04	7.760	0.190	5.000	2.840	30.500	1.510
6/22/2001	1,225.35	9.010	0.190	5.250	2.720	30.500	1.440
6/25/2001	1,218.60	8.500	0.230	4.700	2.770	30.040	1.930
6/26/2001	1,216.76	8.870	0.229	5.200	2.650	30.030	2.240
6/27/2001	1,211.07	8.600	0.200	5.230	2.670	30.070	2.170
6/28/2001	1,226.20	8.460	0.210	5.250	2.740	29.970	2.060
6/29/2001	1,224.42	8.640		5.190	2.970	31.870	2.040
7/2/2001	1,236.72	9.340		5.480	3.160	31.150	1.950
7/3/2001	1,234.45	9.620		5.320	3.020	30.810	1.940
7/5/2001	1,219.24	9.100		4.800	2.830	30.100	1.790
7/6/2001	1,190.59	8.870		4.510	2.640	29.400	1.790
7/9/2001	1,198.78	8.680		4.620	2.410	29.990	1.730
7/10/2001	1,181.52	8.690		4.290	2.770	29.840	1.600
7/11/2001	1,180.18	8.630		4.000	2.680	29.140	1.540
7/12/2001	1,208.14	9.020		3.940	2.760	29.950	1.420
7/13/2001	1,215.88	8.800		3.650	2.740	29.520	1.330
7/16/2001	1,202.45	8.470		4.140	2.650	29.220	1.270
7/17/2001	1,214.44	8.100		4.010	2.550	28.960	1.350
7/18/2001	1,207.71	7.620		3.810	2.450	27.810	1.380
7/19/2001	1,215.02	7.770		4.010	2.300	28.230	1.390
7/20/2001	1,210.85	7.970		4.440	2.200	30.000	1.230
7/23/2001	1,191.03	7.550		5.010	2.390	28.550	1.170
7/24/2001	1,171.65	7.070		4.860	2.260	27.050	0.980
7/25/2001	1,190.49	7.310		5.180	2.230	27.400	0.790
7/28/2001	1,202.93	7.200		5.070	2.180	28.010	0.660
7/27/2001	1,205.82	7.100	0.125	4.500	2.000	27.900	0.570

Source: Bloomberg.

TyCom Industry Stock Data

<u>DATE</u>	<u>SP500</u>	<u>GBLXQ</u>	<u>TSIXQ</u>	<u>LVL.T</u>	<u>WCGRQ</u>	<u>Q</u>	<u>MFNXQ</u>
7/30/2001	1,204.52	7.000	0.105	4.190	2.200	27.200	0.590
7/31/2001	1,211.23	6.550	0.080	4.470	2.160	26.000	0.870
8/1/2001	1,215.93	7.000	0.060	4.580	2.250	25.210	0.780
8/2/2001	1,220.75	5.680	0.100	4.700	2.210	23.100	0.730
8/3/2001	1,214.35	5.970	0.095	4.620	2.260	24.400	0.830
8/6/2001	1,200.48	5.930	0.090	4.610	2.150	24.290	0.900
8/7/2001	1,204.40	6.280	0.085	4.380	2.080	24.000	0.960
8/8/2001	1,183.53	6.110	0.085	4.290	2.060	24.200	0.950
8/9/2001	1,183.43	6.160	0.088	4.390	1.990	24.290	0.950
8/10/2001	1,190.16	5.880	0.080	4.320	1.900	24.770	0.920
8/13/2001	1,191.29	5.800	0.084	4.350	1.790	24.660	1.010
8/14/2001	1,186.73	5.840	0.083	4.300	1.710	26.000	1.140
8/15/2001	1,178.02	5.750	0.080	4.150	1.890	25.240	0.700
8/16/2001	1,181.66	5.260	0.083	4.040	1.970	25.200	0.660
8/17/2001	1,161.97	4.980	0.083	3.760	2.010	23.350	0.740
8/20/2001	1,171.41	4.930	0.080	3.790	2.000	24.100	0.930
8/21/2001	1,157.26	4.900	0.085	3.720	1.890	23.220	0.820
8/22/2001	1,185.31	4.710	0.078	3.600	1.740	22.100	0.750
8/23/2001	1,162.09	4.500	0.078	3.650	1.680	20.470	0.650
8/24/2001	1,184.93	4.250	0.085	3.690	1.690	22.270	0.680
8/27/2001	1,179.21	4.030	0.090	3.920	1.660	21.700	0.660
8/28/2001	1,161.51	3.970	0.085	4.010	1.460	20.980	0.680
8/29/2001	1,148.60	4.190	0.080	3.850	1.490	20.020	0.640
8/30/2001	1,129.03	4.060	0.088	3.540	1.500	20.650	0.760
8/31/2001	1,133.58	4.230	0.080	3.820	1.650	21.500	0.750
9/4/2001	1,132.94	3.850	0.084	3.590	1.680	20.850	0.880
9/5/2001	1,131.74	3.510	0.080	3.320	1.610	20.250	0.970
9/6/2001	1,106.40	3.230	0.080	3.140	1.540	19.260	0.890
9/7/2001	1,085.78	3.580	0.075	3.180	1.650	18.140	0.610
9/10/2001	1,092.54	3.780	0.075	3.820	1.480	19.900	0.450
9/17/2001	1,038.77	3.510	0.050	3.710	1.410	18.570	0.400
9/18/2001	1,032.74	3.480	0.050	3.560	1.280	19.650	0.470
9/19/2001	1,016.10	3.670	0.050	3.760	1.210	20.150	0.440
9/20/2001	984.54	3.270	0.060	3.610	1.360	19.560	0.500
9/21/2001	965.80	2.980	0.063	3.800	1.420	19.000	0.470
9/24/2001	1,003.45	3.100	0.050	4.100	1.540	20.030	0.490
9/25/2001	1,012.27	2.950	0.050	3.990	1.400	19.860	0.460
9/26/2001	1,007.04	2.410	0.065	3.790	1.310	19.400	0.400
9/27/2001	1,018.61	1.970	0.050	3.800	1.190	16.500	0.340
9/28/2001	1,040.94	1.800	0.060	3.780	1.180	16.700	0.340
10/1/2001	1,038.55	1.900	0.058	3.620	1.140	16.500	0.330
10/2/2001	1,051.33	2.070	0.059	3.570	1.140	15.600	0.710
10/3/2001	1,072.28	2.090	0.065	3.470	1.210	17.200	0.620
10/4/2001	1,069.62	1.070	0.059	3.050	1.450	16.550	0.690
10/5/2001	1,071.38	0.830	0.065	1.980	1.300	16.960	0.670
10/8/2001	1,062.44	0.730	0.059	2.450	1.270	17.430	0.630
10/9/2001	1,056.75	0.380	0.065	2.050	1.250	18.260	0.630
10/10/2001	1,080.99	0.620	0.080	2.350	1.280	18.480	0.670
10/11/2001	1,097.43	0.880	0.130	2.650	1.300	18.600	0.660
10/12/2001	1,091.65	0.820	0.110	2.940	1.320	18.800	0.610

Source: Bloomberg.

TyCom Industry Stock Data

DATE	SP500	GBLXQ	TSIXQ	LVL1	WCGRQ	Q	MENXQ
10/15/2001	1,089.98	1.140	0.100	3.310	1.260	18.900	0.620
10/16/2001	1,097.54	1.360	0.100	3.310	1.260	17.830	0.760
10/17/2001	1,077.09	1.560	0.105	3.140	1.210	16.600	0.740
10/18/2001	1,068.61	1.200	0.120	2.890	1.200	16.700	0.780
10/19/2001	1,073.48	1.080	0.120	2.960	1.180	16.170	0.760
10/22/2001	1,089.90	1.150	0.070	3.160	1.160	16.110	0.760
10/23/2001	1,084.78	1.180	0.070	3.150	1.140	16.340	0.740
10/24/2001	1,085.20	1.120	0.075	3.000	1.160	16.810	0.740
10/25/2001	1,100.09	1.170	0.075	3.050	1.150	17.510	0.730
10/26/2001	1,104.61	1.240	0.075	3.670	1.250	17.750	0.700
10/29/2001	1,078.30	1.250	0.085	3.560	1.300	16.900	0.700
10/30/2001	1,059.79	1.150	0.080	3.290	1.310	16.000	0.730
10/31/2001	1,059.78	1.130	0.085	3.440	1.670	12.950	0.720
11/1/2001	1,084.10	1.130	0.095	3.500	1.560	12.000	0.740
11/2/2001	1,087.20	1.080	0.080	3.470	1.390	11.970	0.730
11/5/2001	1,102.84	1.140	0.070	3.780	1.490	12.500	0.760
11/6/2001	1,118.86	0.980	0.070	3.890	1.490	11.790	0.790
11/7/2001	1,115.80	0.820	0.070	3.880	1.440	11.510	0.720
11/8/2001	1,118.54	1.070	0.070	4.520	1.330	11.940	0.700
11/9/2001	1,120.31	1.050	0.070	4.970	1.280	11.850	0.670
11/12/2001	1,118.33	1.080	0.070	4.980	1.360	11.540	0.670
11/13/2001	1,139.09	1.070	0.070	5.490	1.630	12.060	0.650
11/14/2001	1,141.21	1.200	0.080	7.320	2.080	12.650	0.720
11/15/2001	1,142.24	1.140	0.143	6.880	2.400	13.700	0.700
11/16/2001	1,138.65	1.240	0.135	6.820	2.610	13.200	0.700
11/19/2001	1,151.06	1.580	0.130	6.450	3.000	13.200	0.720
11/20/2001	1,142.66	1.600	0.121	6.510	2.700	12.840	0.730
11/21/2001	1,137.03	1.580	0.121	6.230	2.450	12.450	0.700
11/23/2001	1,150.34	1.690	0.140	6.060	2.450	12.650	0.710
11/26/2001	1,157.42	1.690	0.121	5.700	2.540	13.190	0.730
11/27/2001	1,149.50	1.730	0.111	6.540	2.370	12.770	0.700
11/28/2001	1,128.52	1.620	0.110	6.130	2.200	12.350	0.680
11/29/2001	1,140.20	1.400	0.095	5.540	2.140	12.200	0.640
11/30/2001	1,139.45	1.270	0.082	5.580	2.440	11.900	0.560
12/3/2001	1,129.90	1.150	0.090	5.260	2.260	11.880	0.550
12/4/2001	1,144.80	1.370	0.101	5.590	2.320	11.660	0.650
12/5/2001	1,170.35	1.330	0.105	6.200	2.380	11.900	0.610
12/6/2001	1,167.10	1.330	0.090	6.340	2.270	11.920	0.610
12/7/2001	1,158.31	1.290	0.090	6.400	2.390	11.770	0.600
12/10/2001	1,139.93	1.180	0.110	6.650	2.310	11.950	0.580
12/11/2001	1,136.76	1.060	0.095	6.590	2.340	12.380	0.560
12/12/2001	1,137.07	1.120	0.095	6.820	2.310	12.100	0.530
12/13/2001	1,119.38	0.740	0.092	6.190	2.210	11.800	0.500
12/14/2001	1,123.09	0.670	0.090	5.770	2.270	12.330	0.460
12/17/2001	1,134.36	0.560	0.085	5.600	2.110	13.440	0.470
12/18/2001	1,142.92	0.720	0.085	5.650	2.060	13.270	0.480
12/19/2001	1,149.56	0.730	0.085	5.450	2.050	13.350	0.470
12/20/2001	1,139.93	0.750	0.080	5.070	1.980	13.600	0.450
12/21/2001	1,144.89	0.650	0.097	4.900	2.090	13.400	0.390
12/24/2001	1,144.65	0.610	0.095	5.050	2.140	13.190	0.400

Source: Bloomberg.

TyCom Industry Stock Data

<u>DATE</u>	<u>SP500</u>	<u>GBLXQ</u>	<u>TSIXQ</u>	<u>LVL</u>	<u>WCGRQ</u>	<u>Q</u>	<u>MFNXQ</u>
12/26/2001	1,149.37	0.640	0.080	5.120	2.280	13.300	0.410
12/27/2001	1,157.13	0.640	0.095	5.000	2.260	13.700	0.460
12/28/2001	1,161.02	0.610	0.090	4.800	2.230	14.240	0.450
12/31/2001	1,148.08	0.840	0.090	5.000	2.350	14.130	0.440

Source: Bloomberg.

5 -- Regression Output

BOA Service Comps vs. SP 500 Regression for Orthogonalization

Regression Statistics	
Multiple R	0.735
R Square	0.540
Adjusted R Square	0.536
Standard Error	0.032
Observations	115

ANOVA				
	df	SS	MS	F
Regression	1	0.134	0.134	132.617
Residual	113	0.115	0.001	
Total	114	0.249		

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.001	0.003	0.436	0.664	(0.005)	0.007
SP500	2.525	0.219	11.516	0.000	2.091	2.959

TCM Return vs. SP 500 Return

Regression Statistics	
Multiple R	0.543
R Square	0.295
Adjusted R Square	0.289
Standard Error	0.043
Observations	115

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.089	0.088	47.301	0.000
Residual	113	0.211	0.002		
Total	114	0.300			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.001	0.004	0.273	0.788	(0.007)	0.009
SP500	2.048	0.298	6.878	0.000	1.458	2.638

Tycom Return Vs. S&P 500 and Orthogonalized BOA Services Index

<i>Regression Statistics</i>	
Multiple R	0.665
R Square	0.442
Adjusted R Square	0.432
Standard Error	0.039
Observations	115

<i>ANOVA</i>				
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	2	0.132	0.066	44.347
Residual	112	0.167	0.001	
Total	114	0.300		

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.001	0.004	0.305	0.761	(0.006)	0.008
SP500	2.048	0.266	7.695	0.000	1.521	2.575
Orthogonalized BOA Index	0.620	0.114	5.429	0.000	0.394	0.846

Exhibit B-33

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW HAMPSHIRE**

In Re: Tyco International, Ltd.
Multidistrict Litigation

ROSEMARIE STUMPF V.
NEIL R. GARVEY, ET AL.
(IN RE TYCOM SECURITIES LITIGATION)

MDL Docket No. 02-1335-B

REBUTTAL EXPERT REPORT OF GREG HALLMAN

April 14, 2008

*Privileged & Confidential
Prepared at the Request of Counsel*

Rebuttal Expert Report of Greg Hallman in Tycom Securities Litigation

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- 1 Rebuttal Expert Report of Greg Hallman**
- 2 Greg Hallman C.V.**
- 3 Additional Documents Considered List**

TAB 1

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW HAMPSHIRE**

In Re: Tyco International, Ltd.
Multidistrict Litigation

ROSEMARIE STUMPF V.
NEIL R. GARVEY, ET AL.
(IN RE TYCOM SECURITIES LITIGATION)

MDL Docket No. 02-1335-B

REBUTTAL EXPERT REPORT OF GREG HALLMAN

April 14, 2008

*Privileged & Confidential
Prepared at the Request of Counsel*

Rebuttal Expert Report of Greg Hallman

I. Introduction

I have been retained by counsel for the lead plaintiff in the TyCom Ltd. Securities Litigation to provide an opinion on damages suffered by the purchasers of the common stock of TyCom in the initial public offering on July 26, 2000, and subsequently in the open market through December 17, 2001, the end of the class period. The District Court, in its opinion denying in part and granting in part defendant's motion to dismiss, summarized plaintiff's allegations as follows: "that the Prospectus was materially false and misleading because it both misrepresented that the demand for undersca fiber-optic cable bandwidth was increasing, and failed to disclose that the market for bandwidth was already saturated with unused capacity."¹

I filed a report outlining my opinions on this matter on December 21, 2007. I have been asked by counsel to respond to a February 25, 2008 report by Mr. Fischel which references my opinion.

II. Qualifications

I am a member of the Finance faculty at the McCombs Graduate School of Business at the University of Texas at Austin where I teach MBA courses in corporate finance and valuation, investment theory and practice, and real estate debt and equity securities (MBS, CMBS, CDOs, REITs). I am also a visiting professor of finance at Instituto de Empresa in Madrid, Spain. Just prior to joining the faculty at the University of Texas I was a Managing Director in the Silicon Valley office of Intecap, Inc., an economic consulting firm purchased by Charles River Associates in 2004. I am currently a Senior Consultant with CRA International. I have an MBA in Finance from Tulane University and a Ph.D. in Finance from the University of Texas at Austin. A copy of my current curriculum vitae (CV) is in Tab 2, which includes my professional presentations and publications, along with a listing of my prior testimony.

¹ 2005 U.S. Dis. LEXIS 19154 at *5.

Rebuttal Expert Report of Greg Hallman

Summary of Opinion

- 1) After reviewing Mr. Fischel's February 25, 2008 report, I find a number of flaws in his arguments and, moreover, continue to believe in the validity of each of my opinions presented in my December 21, 2007 report. Specifically:
 - a. The initial TyCom stock price was largely based on the market's expectations of future undersea bandwidth demand, and the significant decline in the stock price was caused by the market's realization that TyCom's demand projections were inflated;
 - b. When information concerning the absence of demand for the capacity that TyCom was constructing reached the market, TyCom's stock price fell in statistically significant amounts, summing in aggregate to at least \$12.61 per share. Plaintiffs claim that TyCom's public statements regarding demand for undersea bandwidth services were both without basis and misleading, and my event study analysis measures the effect on the value of the stock related to the market's realization in January, February, and March of 2001 that the level of future undersea bandwidth demand represented by TyCom was overstated;
 - c. Discounted cash flow analysis of the value of TyCom using the valuation models used by Goldman Sachs and Salomon Brothers analysts incorporating reduced demand and sales assumptions show that the market value of TyCom's stock at the time of the offering under these reduced demand and sales assumptions was between \$13.79 and \$16.57 per share, which supports the conclusion from the event study that TyCom's stock was artificially inflated by at least \$12.61 per share on the date of the offering;
 - d. The significant decline in TyCom's stock price resulting from the market's realization that TyCom's representations of future undersea bandwidth demand were

Rebuttal Expert Report of Greg Hallman

overstated caused the purchasers of TyCom stock to suffer losses of \$12.61 per share.

This estimate provides a sound basis for computing the damages suffered by members of the class in this action, if the IPO would have been possible had there been no overstatement of bandwidth demand by the defendants.

Table 1 below states the level of inflation remaining in the market price of TyCom stock on each day of the class period.

Table 1

<u>Start Date</u>	<u>End Date</u>	<u>Inflation Remaining</u>
7/26/2000	1/16/2001	\$12.61
1/17/2001	1/17/2001	\$11.11
1/18/2001	1/18/2001	\$8.66
1/19/2001	2/21/2001	\$6.77
2/22/2001	2/22/2001	\$5.05
2/23/2001	3/7/2001	\$3.31
3/8/2001	3/14/2001	\$2.01
3/15/2001	3/21/2001	\$1.15
3/22/2001	12/17/2001	\$0.00

2) Mr. Fischel presents several arguments primarily addressing liability and scienter which are unrelated to my opinions, but which are flawed and/or irrelevant. Specifically:

- a. Mr. Fischel's opinion that stocks are a risky investment is irrelevant to the claims in this matter.
- b. Mr. Fischel's opinion that insiders and Tyco would not have held/bought back TyCom stock if plaintiff's claims were true is flawed in its logic and conclusions.

Rebuttal Expert Report of Greg Hallman

III. Bases for Opinions

I have organized the assertions, claims, and arguments by Mr. Fischel as they relate to the opinions in my 12/21/07 Report.

Hallman Original Opinion 1: The initial TyCom stock price was largely based on the market's expectations of future undersea bandwidth demand, and the significant decline in the stock price was caused by the market's realization that TyCom's demand projections were inflated.

A. Mr. Fischel states "As new information became available during this period, investors reevaluated their expectations for telecommunications companies, resulting in an industry-wide decline in the market values of these companies. The reasons for investors' reassessment are varied and include the factors cited by Plaintiff – bandwidth demand, bandwidth supply and bandwidth pricing – as well as other factors that Plaintiff ignores" (at ¶26)

- 1) Mr. Fischel does not offer any details to accompany the single quote he provides from the Fall 2003 Federal Reserve report regarding "other factors." In terms of estimating damages, the industry-wide decline in market values and the economy's swing into recession mentioned in the quote from the Federal Reserve report are controlled for in my two-factor model, and are accounted for and therefore not included in my estimate of damages.
- 2) Based on my review of the contemporaneous record, it is clear that TyCom's stock price was driven by market expectations and TyCom's predictions of bandwidth demand. The collapse in the stock price was caused by declining expectations regarding both overall bandwidth demand and circuit sales on TyCom's TGN. Taken as a whole, the contemporaneous record does not support Mr. Fischel's claim that there were "other factors" responsible for the decline in TyCom's stock over the class period. A review of the contemporaneous record makes very clear that TyCom was a broadband

Rebuttal Expert Report of Greg Hallman

story, and its stock price was almost completely driven by the market's expectation of broadband demand and TyCom circuit sales. In my initial report I had only emphasized events that were associated with statistically significant declines in TyCom's stock after controlling for the return on the market and the return to a set of industry comparables. I did not include other statements revealing the lack of demand, and the true supply and pricing for bandwidth, although these other statements generally coincided with the overall decline in TyCom's stock price.

- 3) Analyst reports on TyCom during the class period were consistent and clear in the view that TyCom was a broadband story. In addition to the statistically significant events that occurred during the period January through March 2001 identified in my 12/21/07 report, information linking TyCom's value to broadband demand was published during the class period through the following analyst reports:

- a) August 9, 2000 -- The title of Goldman Sachs' report on TyCom is "**Well positioned to benefit from burgeoning bandwidth demand.**" (emphasis in original) In the section of their report titled "Key Risks", Goldman stated: "The key risks for TyCom is that demand for subsea bandwidth does not develop as the company or we anticipate and/or pricing declines at much greater pace than estimated. However, we believe that a number of global mega-trends will continue to drive an explosion of demand and declining bandwidth prices will stimulate further increases in demand as bandwidth-intensive applications proliferate."
- b) August 18, 2000 -- Bear Stearns' report contains the following statement in the section of their report titled "Investment Considerations": "Estimating demand for transoceanic bandwidth, including price elasticities and the impact of internet-related growth, is the major uncertainty in the valuation. This factor drives both the upside potential and the downside risk in the share price." The same report states, in a discussion of the spin-off of TyCom: "The strategic change will enable TyCom to directly share in the expected huge opportunity in growth for transoceanic traffic. For example, research conducted for TyCom by The

Rebuttal Expert Report of Greg Hallman

Yankee Group projects that cross-Atlantic and cross-Pacific undersea traffic will expand at compound annual rates of 123% and 129%, respectively, from 2000 through 2005."

- c) August 21, 2000 – In the section of their coverage report on TyCom titled "Earnings Outlook", JP Morgan wrote: "Once TyCom has built out the first phase of the two-phase global network in 2002, the company should generate roughly 72% of its cash revenue from broadband circuit sales, up from an estimated 36% in 2001, the first year in which TyCom is likely to generate revenue as a broadband network service provider."
- d) September 12, 2000 -- In Bear Stearns' report on TyCom titled "Subsea Optical Wave-maker: Ride the Tsunami," the fourth bullet point on the first page states: "Initiating coverage with an Outperform rating -- TyCom is well-positioned to participate in the booming global undersea IP bandwidth market."
- e) January 17, 2001 – Bear Stearns' report states: "The key variable in the valuation of the stock is the estimated demand growth (including elasticity) for undersea capacity. With five new transatlantic cables coming into service in late 2000 through mid 2001, investors will soon have actual sales results (as opposed to theoretical projections) for indicators of market requirements."
- f) January 22, 2001 – In Table 4 of their report on Tyco, which summarizes each of Tyco's major business lines and lists the "Driver" for each business line, JP Morgan writes that the "Driver" for TyCom is "Demand for undersea bandwidth."
- g) March 30, 2001 -- Credit Suisse's TyCom report states that they are lowering their price target for TyCom stock from \$60 to \$24 (the stock was currently trading for \$13.65) "due to a change in the mix of revenue at the company from the higher margin Network Services business to the lower margin Systems Services and Equipment business." The report also states: "We have also lowered our fiscal 2001 GAAP revenue estimate from undersea capacity sales by \$400 million or 50%, to \$400 million, and cash revenue from undersea

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capacity sales by \$700 million, or 60%, to \$500 million." Table 1 of this March 30, 2001 CSFB report shows the changes to CSFB's TyCom earnings model and clearly shows that TyCom's stock fell from its IPO price to the then-current \$13.65 in the face of *increasing* system installation revenue and profit projections (3rd Party Systems) but *decreasing* capacity sales and EBITDA (Network Services).

Table 1
Changes to Earnings Model
figures are in \$ millions except earnings per share

	2001E		2002E	
<u>Network Services (TCN)</u>	<u>Prior Estimate</u>	<u>Current Estimate</u>	<u>Prior Estimate</u>	<u>Current Estimate</u>
GAAP Revenue	1,200	510	3,150	1,451
EBITDA	200	140	2,089	1,000
EPS	\$0.26	\$0.16	\$0.63	\$0.33
<u>3rd Party Systems</u>				
GAAP Revenue	2,800	2,400	1,240	2,400
EBITDA	400	480	791	830
EPS	\$0.43	\$0.53	\$0.23	\$0.53
<u>Total TCM</u>				
GAAP Revenue	2,800	2,800	3,329	3,400
EBITDA	600	620	791	830
EPS	\$0.69	\$0.69	\$0.86	\$0.86

Source: Credit Suisse First Boston research estimates.

Table 4 of this CSFB report gives a more detailed view of CSFB's earnings model for TyCom and also shows that the model as of March 30, 2001 showed a substantial decrease in projected capacity sales but a substantial increase in projected "Systems Services" revenue.

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Table 4

Summary TyCom Model

figures are in \$ millions except earnings per share

	Network Services				Systems Services				Total Company			
	2001		2002		2001		2002		2001		2002	
	Prior	Current	Prior	Current	Prior	Current	Prior	Current	Prior	Current	Prior	Current
Cash Revenue	1,200	510	3,150	1,451	2,000	2,400	1,240	2,400	3,200	2,910	4,390	3,851
GAAP Revenue	800	400	2,089	1,000	2,000	2,400	1,240	2,400	2,800	2,800	3,329	3,400
- COGS	(400)	(200)	(1,133)	(542)	(1,440)	(1,728)	(893)	(1,728)	(1,840)	(1,928)	(2,028)	(2,270)
Gross Profit	400	200	956	458	560	672	347	672	960	872	1,300	1,130
- SG&A	(200)	(60)	(413)	(109)	(160)	(152)	(99)	(152)	(360)	(252)	(612)	(300)
EBITDA	200	140	543	350	400	490	248	480	600	620	791	830
+ Non-cash COGS	350	175	833	350	-	-	-	-	350	175	833	399
+ Deferred Revenue	400	110	1,961	451	-	-	-	-	400	110	1,961	451
Adjusted EBITDA	950	425	2,437	1,200	400	490	248	480	1,350	905	2,605	1,680
EPS Contribution	\$0.26	\$0.16	\$0.63	\$0.33	\$0.43	\$0.53	\$0.23	\$0.53	\$0.69	\$0.89	\$0.86	\$0.86
Gross Margin	50.0%	50.0%	45.8%	45.8%	28.0%	28.0%	28.0%	28.0%	34.3%	31.1%	39.1%	33.2%
Non-cash COGS	43.8%	43.8%	39.9%	39.9%	0.0%	0.0%	0.0%	0.0%	12.5%	6.3%	25.0%	11.7%
EBITDA Margin	25%	36%	26%	36%	20%	20%	20%	20%	21.4%	22.1%	23.8%	24.4%

Source: Credit Suisse First Boston research estimates.

Notably, even with the substantially reduced projections for capacity sales, CSFB still concluded that the majority of TyCom's target stock value (\$17 of the \$24 target price) was derived from projected capacity sales, as illustrated in Table 3 of the CSFB report.

Table 3

Sum of Parts Valuation

figures are in \$ millions except price per share

TyCom Division	'02 EBITDA/Rev	Multiple	EV	'02 Net Debt	Mkt Value	Price per
Network Services [1]	1,200	8x	9,600	650	8,950	\$17
Systems Services [2]	2,400	1.5x	3,600	0	3,600	\$7
Total TyCom			13,200	650	12,550	\$24

Notes: [1] We value the Network Services division on an EBITDA multiple.

[2] We value the Systems Services division on a revenue multiple.

Source: Credit Suisse First Boston research estimates.

- h) April 3, 2001 – Deutsche Bank Alex Brown's report also documents that the fall in TyCom's stock price to the then-current level of \$10.95 was accompanied by a substantial decrease in projected capacity sales and an increase in projected installation sales (TSSI Revenue), as shown in Figure 4 of the Deutsche report:

Rebuttal Expert Report of Greg Hallman**Figure 4: TyCom – Full Year Estimates**

	2000A	OLD 2001E	NEW 2001E	OLD 2002E	NEW 2002E
TSSL Revenue	2,540	2,032	2,261	1,374	1,492
Capacity Sales(GAAP)	0	846	446	2,251	1,526
Total Revenue (GAAP)	2,540	2,878	2,707	3,624	3,018

- i) April 11, 2001 – In their “Initiation of Coverage” report, WCG states in the second bullet point on the first page of the report: “To own TyCom one has to believe in the long-term growth of bandwidth demand and vertical integration.” On the third page of an April 3, 2001 version of their “Initiation of Coverage” report WCG states: “A lower contribution from circuit sales was not received favorably by the market because the pace of sales and build out of the TGN drive the TyCom story.”
- j) April 19, 2001 – Credit Suisse First Boston downgraded TyCom stock in a report titled “Downgrading to Hold and Lowering Network Services Revenue Estimates by 38%.” In the second bullet point on the cover of this report CSFB stated: “We are lowering FY01 Network Services estimates to \$250 million in GAAP revenues and \$300 million in cash revenues, down 37.5% and 40%, respectively, from our recently lowered \$400 million and \$500 million estimates.” In the last bullet point on the first page of this report, CSFB reiterated management’s guidance for lowered Network Services but overall unchanged GAAP revenue, reporting: “Management guided 2001 Network Services GAAP revenues down to \$250 million and \$50 million in deferred revenues, while reiterating its consolidated GAAP revenue target of \$2.8 billion.” Even at the reduced expectations for the level of Network Services EBITDA/Rev, CSFB continued to see most of the value of TyCom stock (then

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trading at \$18.25) in the Network Services (i.e., capacity sales) portion of the business, as shown in Table 1 of the CSFB report.

Table 1 Sum-of-Parts Value \$ millions						
TyCom Division	'02 EBITDA/Rev	Multiple	EV	'02 Net Debt	Mkt Value	Price per Share
Network Services ¹	650	8x	8,800	650	6,150	\$12
Systems Services ²	2,800	1.5x	3,900	0	3,900	\$7
Total TyCom			13,220	650	12,570	\$19

¹We value the Network Services division on an adjusted EBITDA multiple.
²We value the Systems Services division on a revenue multiple.
Source: Credit Suisse First Boston research estimates

In the text following Table 1, CSFB writes "While it appears that TyCom's existing Systems Services construction business is outperforming market expectations and will most likely continue to provide steady revenues in the range of \$2 billion-plus per year going forward, we believe that the stock is fully valued given the significant loss in value the company is experiencing in the Network Services division – the side of the business that we believe needs to be the strong growth engine for the stock to work....Note that while we also firmly believe that the TyCom Systems Supply division, through its AT&T Bell Labs heritage, remains the premier designer, builder, and installer of undersea cable systems in the world, we believe that it simply cannot make up for the severe slowdown in the Network Services division, which on a revenue-dollar for revenue-dollar basis, detracts from the overall story significantly more than the growth in the Systems division adds." Table 2 of this same CSFB report shows the dramatic decline in guidance for the Network Services portion of TyCom's business during the class period.

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Table 2
Summary TyCom Model
 \$ millions except earnings per share

	Network Services						Total Company					
	2001			2002			2001			2002		
	Prior	Mar 30 Est	Current	Prior	Mar 30 Est	Current	Prior	Mar 30 Est	Current	Prior	Mar 30 Est	Current
Cash Revenue	1,200	510	300	3,150	1,451	1,101	3,200	2,910	2,850	4,350	3,851	3,501
GAAP Revenue	800	400	250	2,089	1,030	1,030	2,800	2,800	2,800	3,329	3,400	3,400
- COGS	(400)	(200)	(125)	(1,133)	(542)	(542)	(1,840)	(1,928)	(1,853)	(2,026)	(2,270)	(2,270)
Gross Profit	400	200	125	956	458	458	960	872	797	1,303	1,130	1,130
- SG&A	(200)	(60)	(38)	(413)	(108)	(108)	(360)	(252)	(230)	(512)	(300)	(300)
EBITDA	200	140	88	543	350	350	600	620	568	791	830	830
+ Non-cash COGS	350	175	109	833	399	399	350	175	109	833	399	399
+ Deferred Revenue	400	110	50	1,061	451	101	400	110	50	1,051	451	101
Adjusted EBITDA	950	425	247	2,437	1,200	850	1,350	905	727	2,685	1,680	1,330
EPS Contribution	\$0.26	\$0.16	\$0.12	\$0.63	\$0.33	\$0.33	\$0.69	\$0.69	\$0.71	\$0.88	\$0.86	\$0.88

k) July 18, 2001 – Bear Stearns lowered their TyCom recommendation from Buy to Neutral.

Under the “Investment Opinion” section on the first page, Bear writes: “The Gravest

Concerns Voiced About Oversupply in the Atlantic Market Proved Valid. TyCom

anticipated major pre-sales on its transatlantic cable, but none materialized. Even after activating the cable, the company has only booked four orders of an indeterminate value.

Considering the steep drop in average STM-1 prices, any price elasticities are unclear.

Customers are leasing capacity instead of purchasing IRUs in order to conserve capital and wait for a bottom in pricing. The upshot is reduced cash flow across the industry.” In the same report, Bear writes “The stock will only respond favorably to major capacity sales, which are unlikely in the next few quarters.”

- 4) During the class period, information entered the market revealing the true prospects for undersea bandwidth supply and demand. In addition to the statistically significant events identified in my 12/21/07 report in the period January through March 2001, information regarding the true prospects for the undersea broadband industry entered the market during the class period as reflected by the following news stories:

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- a) November 8, 2000 – An article in the Financial Times titled “High fliers blame ‘panic’ for tech falls: Investors fear glut in telecoms capacity” stated: “Two other carriers, 360 Networks and TyCom, have dropped by around 30 percent. Behind the latest falls lies a fear that over-investment in the new undersea fiber-optic networks will lead to a glut of telecom capacity around the world.”
- b) November 13, 2000 – An article in Fortune titled “Still Afloat in an Ocean of Doubt” stated: “The problem for Maffei is that 360Networks isn’t exactly alone. Global Crossing, Level 3 Communications, Flag Telecom, Williams Communications, and Tyco’s TyCom Ltd. are also building global networks, along with older telcos like WorldCom. The boom has led some pundits to predict a bandwidth glut and left the industry divided on how much is enough.”
- c) December 2000 – A publication by the Gale Group, Inc. titled “America’s Network Telecom Investor Supplement” contains the following statements: “Announcements in the past couple of months indicate an astonishing amount of undersea capacity coming online in the next year.” “No one seems to think that there will be too much bandwidth, except credit-rating agency Standard & Poors, which issued a warning against the risk of too much capacity. ‘Given the aggressive expansion by telecommunications providers, excess capacity is becoming a significant risk,’ S&P said in September. The industry consensus, apart from a few critics, is that whatever bandwidth the carriers build today, users will need more tomorrow.”
- d) December 12, 2000 – A transcript of CNBC News relates the following statements from Ron Insana, the co-anchor of CNBC News, and Mr. Henry Cavanna of J.P. Morgan:
 - Mr. CAVANNA: A—a TyCom enormous, well-funded—that’s building—you know, part of Tyco that’s building a global undersea telecom network.
 - INSANA: Do we need more of that?
 - Mr. CAVANNA: Well, that’s the issue.

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- e) February 1, 2001 -- An article published by America's Network titled "The Coming Bandwidth Bubble Burst" contained the following: "The myth of Internet traffic that doubles every three of four months is dangerous," argues Andrew Odlyzko of AT&T Research Labs. It leads to bad decisions. It sure helped to inflate the current bubble in optical networking stocks. After all, if demand is outpacing supply of transport capacity, then money making opportunities are virtually limitless."
- f) March 19, 2001 -- An article titled "Laying It On -- C&W stares down transatlantic capacity glut with Apollo cable deal" published by tele.com starts with the following two sentences: "Sometimes even service providers get an offer they can't refuse. With so much transatlantic capacity available that one telecom executive says providers are practically giving it away,"
- g) May 28, 2001 -- An article titled "The Most Aggressive CEO" about Dennis Kozlowski published by Business Week contained the following quote: "'There is a glut of undersea capacity,' warns Qwest Communications International Inc. CEO Joseph P. Nacchio. 'TyCom's stock, sold publicly last year to help finance the network, is 64% off its high.'"
- h) August 28, 2001 -- An article titled "Hot Lines Beneath the Deep Blue Sea" contained the following statements about TyCom: "TyCom also has its doubters. The stock, which has traded as high as \$46 a share in the past twelve months, has recently been in the \$13 range. 'There is an excess of undersea networks,' one industry watcher says. 'There aren't many ways to do different things with undersea cables. They are only differentiated by price.' A turnaround will require increased demand, he adds, 'and we're not seeing it.'"
- i) September 10, 2001 -- An article titled "Drowning in the Pacific cable glut; international telecom" published in Communications Week International contained the following: "Right now, the demand simply is not there," said William Hahn, senior analyst at Gartner Group, headquartered in Stamford, Connecticut. "I honestly don't see it emerging, not in the time it would take to recoup their investment."

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j) December 1, 2001 – A post-mortem on the crash in telecoms and network providers titled “A road to nowhere? Bandwidth strategy” published by Communications International contained the following: “When this much bandwidth came on stream prices began to fall by as much as 80 percent between April 2000 and November 2001 claims bandwidth exchange Band-X....This fall in prices has been coupled with a huge drop in demand. Or to be more precise, predicted demand. The disappearance of the dotcom, asps failing to materialize and stifled broadband access has scuppered most of the bandwidth forecasts made between 1998 and 2000 when backbone building began in earnest. As the low levels of demand coupled with low prices began to kick in, indebted telcos ended up selling below cost price to encourage short-term cash flow.”

5) I understand from counsel that defendants have an affirmative defense under Section 11e of disproving loss causation. Specifically, if:

the defendant proves that any portion or all of such damages represents other than the depreciation in value of such security resulting from such part of the registrations statement, with respect to which his liability is asserted, not being true or omitting to state a material fact required to be stated therein or necessary to make the statements therein not misleading, such portion of or all such damages shall not be recoverable.

Based on my review of the contemporaneous record in this case, specifically as it relates to Mr. Fischel's claim that there were “other factors” leading to plaintiffs' losses in addition to the alleged misrepresentation of demand, it is my conclusion that the decline in the stock price of TyCom, and therefore the damages suffered by the plaintiffs, were clearly driven by the change in the market's perception of broadband supply and demand during the class period and the corresponding discovery that TyCom's representations regarding demand were simply not accurate. My review of the contemporaneous record shows no other substantial factors causing the decline in TyCom's stock

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price during the class period. Mr. Fischel offers no evidence – no event studies or any other commonly accepted statistical analyses – that “other factors” besides the market’s realization that broadband demand was significantly less than existing supply caused the decline in TyCom’s stock price.

- B. Mr. Fischel asserts that “Plaintiffs ignore adverse changes in industry and business conditions that caused TyCom Investors’ losses” (at ¶¶23-28)
- 6) Mr. Fischel claims that I ignore “adverse changes in industry and business conditions that caused TyCom investors losses.” This is not true. I spent much of my 12/21/07 report discussing “industry events” during the class period. I agree that information revealed to TyCom investors through industry events led to the decline in TyCom’s stock during the class period. However, rather than being an alternative to the allegations of this case as a cause of the decline, the decline of TyCom’s stock price in the face of this industry news supports the allegations in this case. The “adverse changes in industry and business conditions” revealed to the market that the inflated demand represented to the market in the TyCom IPO process did not exist, and that existing supply was sufficient to service that demand. Given TyCom’s delayed and untimely disclosure regarding true broadband demand, the industry news was in fact the revelation to the market of TyCom’s misrepresentation. TyCom was a “pure play” in broadband. As shown above, bandwidth demand drove the stock price, and when the market discovered there was insufficient demand, the stock price dropped.
- C. Mr. Fischel states that an investment in TyCom over the “class period would have performed better than an investment” in comparable companies (at ¶27)
- 7) Mr. Fischel “illustrates” the collapse in the market values of telecommunications companies by graphing the stock price performance of companies identified as “services comparables” by Banc of

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America,² and shows on his chart that TyCom's stock fell less than those stocks. This chart is not relevant to the specific damages questions in this case. My statistical model controls for industry movements and identifies days on which TyCom stock dropped by a statistically significant amount after controlling for both market and industry returns. Mr. Fischel's broad-brush approach of simply presenting and comparing TyCom's returns against other industry participants over the class period with no accompanying statistical analysis doesn't contradict my own statistical results, nor does it speak to the question of whether or not TyCom shareholders were damaged by management's alleged misrepresentation of bandwidth demand.

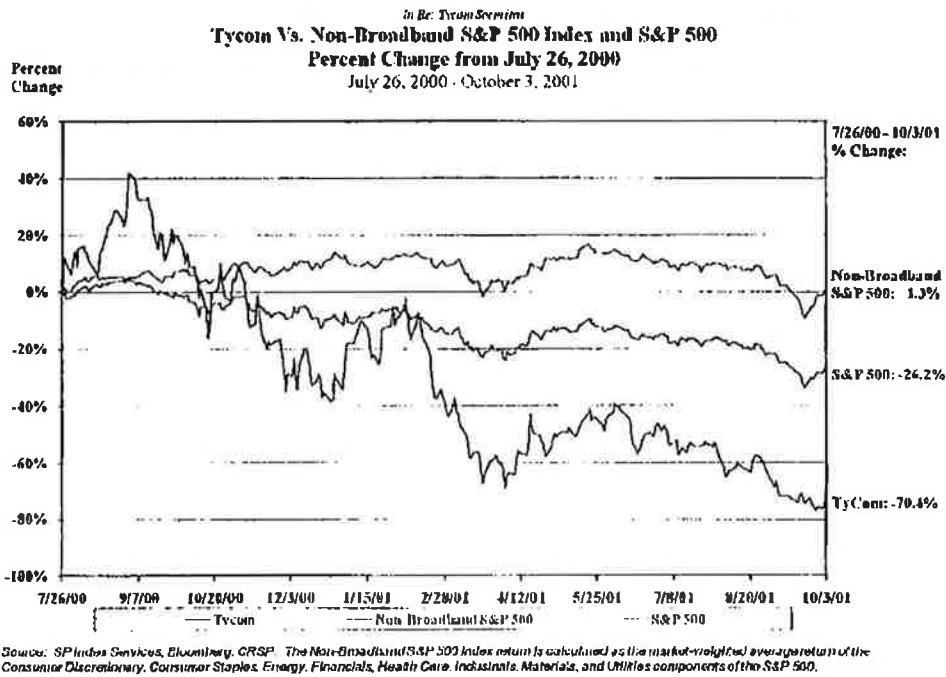
- 8) Additionally, Tycom's stock performed significantly worse than either the S&P 500 or the Non-broadband components of the S&P 500.³ Between July 26, 2000 (the first day of trading for TyCom) and October 3, 2001 (the day that Tyco announced the buyback of the public shares of TyCom) TyCom's stock dropped 70.4%, while the S&P 500 dropped 26.2%, and the Non-Broadband components of the S&P 500 gained 1.3%. See Chart 1 below.

² Banc of America Securities "TyCom Ltd." 8/21/00 pg 7.

³ The Non-Broadband S&P 500 index return is calculated as the market-weighted average return of the Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Materials, and Utilities components of the S&P 500. This excludes the Telecom and Technology components of the S&P 500.

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Chart 1



D. Mr. Fischel asserts that “industry experts independently concluded that bandwidth demand was increasing.” (at ¶¶23-25)

9) At ¶23, Mr. Fischel cites five analyst/industry reports that he says support the idea that “at the time of the IPO, many industry experts independently concluded that bandwidth demand was increasing.”

1. UBS July 20, 2000 Level 3 Communications Report (Fischel Exhibit L.)
2. SSIB May 3, 2000 Global Crossing Ltd. Report (Fischel Exhibit M)
3. DLJ July 18, 2000 360Networks Report (Fischel Exhibit N)
4. Sands Brothers June 2, 2000 Global Crossing Report (Fischel Exhibit O)
5. Hibernia Southcoast Capital May 17, 2000 Broadwing Report (Fischel Exhibit P)

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In ¶24, he cites reports that he says support the idea that “during the plaintiff class period, many industry experts continued to believe that bandwidth demand was increasing.”

1. Credit Suisse - September 15, 2000 TyCom Report (Fischel Exhibit Q)
2. McDonald Investments - September 20, 2000 TyCom Report (Fischel Exhibit K)
3. JP Morgan - September 8, 2000 Telecom Services Industry Study (Fischel Exhibit R)

In ¶25, he cites a single Prudential report dated March 29, 2000 on emerging telecommunications companies (Fischel Exhibit S) to support the idea that “plaintiff ignores that many industry experts independently concluded that increased bandwidth supply and lower bandwidth prices would result in increased bandwidth demand, thereby improving TyCom’s future prospects.”

10) Despite his claims that these reports “independently” reached optimistic conclusions about the state of broadband demand, Mr. Fischel does not address the fact that none of the quotes he presents pre-date the filing of the initial TyCom prospectus on March 10, 2000. As such, it is likely that the information in that prospectus (e.g., statements such as “We are launching the TyCom Global Network to satisfy the increasing demand for undersea fiber optic connectivity driven by the growth of the Internet and the expansion of wireless and other bandwidth-intensive applications.”) was incorporated into those market participants’ estimates of the demand for bandwidth, conflicting with Mr. Fischel’s claim that these conclusions were “independent” of the information contained in TyCom’s prospectus and the fact of TyCom’s IPO. TyCom’s registration statement was filed March 10, 2000, but Tyco’s intention of spinning off TyCom through an IPO was announced by Tyco in a PR Newswire report dated January 17, 2000.

11) The majority of the reports cited by Mr. Fischel also post-date the amended prospectus filed by TyCom which contained what plaintiff’s claim is a specific quantitative misrepresentation, a citation of the Yankee Group study stating “that transatlantic fiber optic traffic volume will increase at a compound annual growth rate of approximately 123% from 2000 through 2005.” Only one report cited by Mr. Fischel predates the introduction of this Yankee Group data to the marketplace, and that

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quote comes from Jack Grubman of underwriter defendant Salomon Smith Barney. As a defendant in this matter, Salomon Smith Barney cannot be considered a party concluding “independently” of defendants that the demand for bandwidth was increasing.

- 12) Four of the eight investment banks cited by Mr. Fischel as providers of independent estimates of bandwidth demand have since entered into consent decrees detailing the lack of “independence” of their analyst coverage in 2000 and 2001. The banks entering into the consent decrees were UBS, Salomon Smith Barney, Credit Suisse First Boston, and JP Morgan, and were authors of the reports on Level 3 Communications, Global Crossing Ltd, TyCom, and the Telecom Services Industry cited by Mr. Fischel. Given their admissions in the consent decree, it is not reasonable to characterize these sources as “independently” concluding that the demand for bandwidth was increasing.⁴

Further, certain of the companies that were the subject of the reports were themselves implicated in securities fraud based on alleged misrepresentations during 2000 and 2001, among other things.⁵

- 13) Mr. Fischel does not address the uncertainty in the market regarding broadband demand entering and during 2000.

- a) A December 1999 paper titled the “Bandwidth Bonanza” by Yankee Group Europe asserted that transatlantic supply will far exceed demand, stating: “The Yankee Group believes that in 1997 and until early 1998 there was a shortage of transatlantic capacity, as there still is across the Pacific. We now believe, however, that over-supply is likely to occur within the next few years.”⁶ The report laid out their reasoning for expectations of slower demand growth: “The Yankee Group believes that the growth in long-haul capacity is outstripping the pace at which broadband access can be deployed widely and cheaply. We believe that a long-haul bandwidth glut will ensue because of the access shortage to small- and medium-sized

⁴ See “Research Analyst Conflicts of Interest Investigation” Internet Source:

http://www.securities.utah.gov/enforce_analysts_settlement.html Accessed 4/3/2008.

⁵ In re Global Crossing Securities Litigation, Master File No. 02 Civ. 910 (GBL) (S.D.N.Y.); In re Salomon Analyst Level 3 Litigation, 02-CV-6919 (BSJ) (S.D.N.Y.); In re Broadwing Securities Litigation, 02-CV-795 (S.D. Ohio); and In re 360Networks Securities Litigation, 02 CV 4837 (S.D.N.Y.). <http://securities.stanford.edu/1026/BRW02-01/>

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enterprises and to residential customers in particular. These markets are crucial to maintain the currently increasing bandwidth growth rates.”⁷

b) Jack Grubman described the uncertainty at the time in his deposition “well, we're now talking early 2000, early/mid 2000 ... So, there was a -- you were starting to get some early concerns about whether the demand would be there to fulfill the supply, putting aside whether that was right or not.”⁸

c) An April 2000 Telecommunications Americas Edition report describing the state of supply and demand in the bandwidth market, states: “Market researchers such as Yankee Group and Ovum generally agree that supply is outstripping usage to an extent that even a continuing drop in prices will not be able to mop up excess capacity. Still, there is a heavy element of guesswork involved in the analysts' prognostications. The numbers game is dicey: It's hard to get a fix on what really is going on.”

14) Faced with such uncertainty, assertions by a knowledgeable market participant such as TyCom were more likely to influence market belief by underplaying doubts and encouraging optimistic forecasts of bandwidth demand.

E. Mr. Fischel believes that the TyCom model forecasts were never disclosed to market participants (at ¶40, fn 22)

15) I did not consider in my initial report whether TyCom's DCF model was disclosed to market participants. Rather, I concluded (in para. 17 of my initial report) that the results from running Goldman and Salomon's DCF models with Mr. Bise's inputs as listed in my initial report supported my conclusions from the event study analysis that “TyCom's stock was inflated by at least \$12.61 per share on the date of the offering.” In any event, contrary to Mr. Fischel's unsupported

⁶ “Bandwidth Bonanza” Yankee Group Europe, 12/99. P. 11.

⁷ “Bandwidth Bonanza” Yankee Group Europe, 12/99. Pp 16-17.

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"understanding" that the TyCom model forecasts were never disclosed to market participants, there is direct evidence that the TyCom model was promulgated to market participants via the underwriter defendants. Sandra Kwon testified that TyCom gave copies of their projection model to both Goldman and Salomon,⁹ and the Trans-Atlantic Demand Projections contained in the "Salomon Smith Barney" model in the IPO Road Show presentation mirror the Trans-Atlantic Demand Projections contained in TyCom's internal projections.¹⁰ Mark Williamson of Goldman Sachs stated in his deposition "that the Salomon model was very similar to the Tyco and TyCom model."¹¹ The TyCom demand numbers also appear in the Merrill Lynch Initiating coverage report issued on August 22, 2000, providing a further disclosure of the TyCom model forecasts to market participants.¹²

F. Mr. Fischel states that "Plaintiff ignores that these allegedly false and misleading statements did not result in an unusually large stock price return on the day of TyCom's IPO. In fact, TyCom's 12.5 percent return on the day of its IPO was relatively low considering that "the average return over 1999-2000 for technology and internet stocks was 80.6%". (at ¶23, fn 12)

16) The 12.5% first-day return on TyCom cited by Mr. Fischel as support for his claim that the TyCom IPO was not hyped by the "allegedly false and misleading statements" ignores the fact that both the size and pricing range of the TyCom offering were substantially increased in the time just prior to the date of the actual offering, evidencing that the "allegedly false and misleading statements" did have an immediate and substantial effect on the market's valuation of TyCom at the time of the IPO.

17) On July 27, 2000 the New York Times reported:

⁹ 9/25/07 Deposition of Jack Grubman p 97 at 5-23.

¹⁰ 1/12/07 Deposition of Sandra Kwon, page 185

¹¹ L.YNT5000010504, CITI-TYCOM004813

¹² 4/26/07 Deposition of Mark Williamson, page 72

¹³ "TyCom: Leaders of the Undersea World" 8/21/00 Merrill Lynch, p 26, ATYCC-09564507

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TyCom Ltd., the world's biggest maker of undersea fiber optic cable, raised \$2 billion yesterday in its initial public offering, about 50 percent more than it had expected just a few days ago.

Tyco International Ltd., TyCom's parent, sold 61.1 million shares at \$32 each, having twice increased the offering before the final sale amid surging demand for companies that are tapping the growing use of the internet.

Tyco raised the number of shares on sale from an initial 43.5 million, and increased the asking price of the shares from an original range of \$26 to \$30.

18) On July 27, 2000 the TheStreet.Com reported on TyCom's IPO, stating:

The [TyCom's] initial public offering of 61 million TyCom shares was priced at \$32 a share, higher than the \$26 to \$30 range, which had already been raised once, from \$20 to \$25. The number of shares on offer had been increased three times.

The exceptionally large offering may have been part of a reason for the Bermuda-based company's lack of a stronger opening-day pop. But another concern is the fact that TyCom, a spinoff of conglomerate Tyco International, will have to shell out a lot of capital before it makes a lot of money, even though it is already a profitable company.

19) An October 16, 2000 Forbes article also supports the notion that TyCom's IPO was a complete success for Tyco. In describing Tyco's 1997 purchase of TyCom's assets from AT&T, and the TyCom IPO, the article contains the following quote from

Rebuttal Expert Report of Greg Hallman

Dennis Kozlowski: “ ‘We just raised \$2 billion for 14% of an asset we paid \$850 million for,’ he chortles.”

Hallman Original Opinion 2: When information concerning the absence of demand for the capacity that TyCom was constructing reached the market, TyCom's stock price fell in statistically significant amounts, summing in aggregate to at least \$12.61 per share. Plaintiffs claim that TyCom's public statements regarding demand for undersea bandwidth services were both without basis and misleading, and my event study analysis measures the effect on the value of the stock related to the market's realization in January, February, and March of 2001 that the level of future undersea bandwidth demand represented by TyCom was overstated.

G. Mr. Fischel asserts that my report “fails to establish that the events [I identify in the report] corrected the alleged fraud” and failed to show that all the news I identified “caused TyCom's stock price to decline.” (at ¶¶36 and 38)

20) My measurement of damages using TyCom's stock returns and my statistical models identify the effect on the value of TyCom stock from the market learning the true state of bandwidth demand. Plaintiffs allege that they were damaged through TyCom's misrepresentation of demand. All of the damage amounts I include in my damage measure based on TyCom's stock price decline are associated with statistically significant negative returns on TyCom stock that occurred on days in which the market received information regarding the true state of bandwidth demand.

21) While I might not have captured all of the price decline in TyCom stock associated with the market learning the true state of bandwidth demand because of the less-than-perfect power of my statistical methodology (virtually all versions of statistical tests on stock returns exhibit less than perfect

Rebuttal Expert Report of Greg Hallman

power¹³), the statistically significant returns that I identify are almost surely associated with the market learning the true state of bandwidth demand and thereby learning of and correcting the alleged fraud perpetrated by TyCom through their original representations of bandwidth demand. As illustrated previously in this report, TyCom was a “pure play” on broadband, and its stock price was a direct reflection of market beliefs about broadband supply and demand.

- 22) Notably, Mr. Fischel does not provide any alternative explanations for the statistically significant declines in the price of TyCom stock identified by my statistical models.

H. Mr. Fischel claims that my report “fails to establish that the information released on the Hallman Disclosure Dates could have been released earlier.” (at ¶37)

- 23) Mr. Fischel conflates the specific details of the identified disclosure/discovery dates with the general information about the true state of the market for broadband. For example, Mr. Fischel singles out the TyCom January 2001 Q1 earnings announcement and implies (but does not state) that TyCom could not have disclosed first quarter earnings sooner. However, under the plaintiffs’ claim, the underlying information of the existence of insufficient demand for undersea broadband capacity reflected in the weak sales number released by TyCom in their Q1 earnings release on January 17, 2001 could have been released sooner by TyCom.

I. Mr. Fischel asserts that my event study analysis is “fundamentally flawed” because my analysis “applies the event study methodology incorrectly” (at ¶34, fn 20)

- 24) First, an academic event study described by Mr. Fischel where “[f]irst one must identify the event or events to be studied” would not have been appropriate in this instance because TyCom’s disclosures

¹³ For a discussion of the power of event-study tests and measurements, see: Brown, S.J., and J.B. Warner, “Measuring security price performance,” *Journal of Financial Economics* 8, September 1980, pp. 205-258. Brown, S.J., and J.B. Warner, “Using daily stock returns: The case of event studies,” *Journal of Financial Economics* 14, March 1985, pp. 3-31.

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regarding the true state of bandwidth demand and the effect that low bandwidth demand would have on the value of TyCom primarily post-dated the market's discovery of that information.¹⁴ Second, an event study is designed to measure the effect of news on the return of a firm's stock controlling for the return on the market and sometimes also controlling for the return on the industry. My methodology does exactly that. I do not agree that my analysis is "fundamentally flawed" simply because TyCom never provided the timely disclosure of new information usually associated with academic event studies as described by Mr. Fischel.

- J. Mr. Fischel asserts that some of the conclusions of my event study are "demonstrably false" because one of the companies announcing news relating to broadband demand had a price increase on the announcement date. (at ¶39)

25) Mr. Fischel alleges that the price reaction of ADC Telecommunications on February 22, 2001 demonstrates that the news about the prospects for the telecommunications, fiber, and internet-traffic sectors released on that day was already factored into the market's expectations on this day. While the January 19, 2001 ADC announcement cited by Mr. Fischel did reveal information about ADC's prospects to the marketplace prior to the February 22 news event I include in my analysis, the February 22, 2001 announcement contained additional information about prospects for both the telecommunications industry and ADC itself above and beyond what was contained in the January 19, 2001 information release.^{15,16} The February 22, 2001 announcement further revised downwards the 2001 projections of results and extended the industry warning into 2002. However, the announcement also contained confounding upbeat company-specific news, including current earnings which exceeded consensus estimates and information on the progress of cost-cutting initiatives. As

¹⁴ My analysis shows that TyCom's Q1 earnings report in January of 2001 caused a statistically significant decline in the stock, and as such I view this Q1 earnings announcement as a disclosure. However, the poor sales performance reported by TyCom in January 2001 was not accompanied by a disclosure statement by TyCom related to reduced demand expectations going forward.

¹⁵ "ADC Updates Guidance on Financial Results" ADC Press Release. 1/19/01.

¹⁶ "ADC Reports First Quarter 2001 Results" Business Wire, 2/21/01.

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this company specific news may have over-ridden the response of ADC's stock price to the industry news released on that day, the positive reaction of ADC stock does not conflict with the market's interpretation of the information released on that day as having negatively impacting the outlook for undersea broadband demand.

26) While my initial report focused on the ADC event as the most salient industry news on February 22, other information about the prospects for the telecommunications, fiber, and internet-traffic sectors also hit the market on that day. For example, after close on February 21, 2001, Brocade Communications Systems, a company providing products and software for data storage centers, beat earnings estimates but "warned of modest growth for the second quarter" and the stock price of Brocade dropped by 6.2% on the announcement.^{17,18} Analysts also lowered expectations for electronic storage company EMC Corporation after a midday call on 2/22/01.¹⁹ These announcements revealed that the true state of the demand for broadband capacity was lower than had been claimed by TyCom, as reflected in the statistically significant -7.3% residual stock return of TyCom stock on February 22.

K. Mr. Fischel asserts "Plaintiff's claims are contradicted by Professor Hallman's opinions" (at ¶29)

27) Mr. Fischel appears to assert (at ¶29) that my analysis contradicts plaintiff's claims because the days that I identify as containing statistically negative TyCom stock returns are not the seven days that plaintiff alleged in the complaint as dates on which TyCom made disclosures concerning reduced demand and oversupply. First, it is my understanding from counsel that my financial analysis is not limited to disclosure dates identified in the complaint, and that there is no restriction on adding disclosure dates beyond those identified in the complaint if

¹⁷ "Thursday's Winners & Losers: ADC Telecom, Emulex, Portal Software, Myriad Genetics" TheStreet.com 2/22/01

¹⁸ Brocade % drop calculated from the closing price of Brocade as report by NASDAQ.com

¹⁹ "EMC: Setting The Stage" UBS Warburg, 2/22/01

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subsequent discovery and analysis indicate, as here, that it is appropriate to do so. Second, even as the information regarding the true state of the bandwidth market was reaching the market, TyCom was not forthcoming with the truth about the lack of demand and oversupply. As alleged in the complaint, for example, TyCom was affirming that it had entered into agreements to sell capacity (¶210 (January 17, 2001), ¶211 (February 13, 2001)), that its customers needed larger increments of capacity (¶ 213 (February 23, 2001)), and that it was expanding capacity on the trans-Atlantic system under construction to meet demand for such larger increments of capacity (¶212 (February 23, 2001)). The fact that the market was already learning of the true facts concerning bandwidth demand and supply before TyCom itself disclosed them is supported by Mr. Fischel's observation that "five of the seven Plaintiff Disclosure Dates occurred after March 21, 2001, the last date that [Hallman] opines TyCom's stock price was inflated." Based on my analysis and review of the record, the five Plaintiff Disclosure Dates referred to by Mr. Fischel occurred after the market had learned much of the truth about the absence of demand for TyCom's single bandwidth product and repriced its stock accordingly. That is, just as the three negative bank analyst reports concerning TyCom released at the end of March and beginning of April, 2001 (CSFB, Deutsche, and Goldman (See Hallman ¶ 9)) had no statistically significant effect on TyCom's stock price because the stock price already reflected the impact of the market learning of the true state of bandwidth demand, the majority of the TyCom disclosures cited in plaintiff's complaint as occurring after March 21, 2001 were also too late to provide any new information to the market regarding the effect of the true state of bandwidth demand on the value of TyCom stock. Third, plaintiff's disclosure dates listed in the complaint relate to the disclosure of the true state of the bandwidth market, and my analysis shows the effect of the

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market learning the true state of the bandwidth market on TyCom's stock value. There is no inconsistency at all between the results of my measure of damages based on TyCom's stock returns and plaintiff's claims.

28) The crux of plaintiff's claim is that defendants misrepresented the projected demand for bandwidth, and constructed a business plan based on an assumption of the existence of unreasonably high demand which they knew or should have known was false, and that plaintiffs suffered damage as the market learned that the demand for bandwidth was significantly lower than represented by TyCom. I measure statistically significant negative TyCom returns, controlling for both market returns and industry returns, on days where the market received information that demand for bandwidth was weak and/or weakening. In my view, my damage analysis provides strong support for plaintiff's claim that they were damaged by TyCom's misrepresentation of projected demand.

Hallman Original Opinion 3: *Discounted cash flow analysis of the value of TyCom using the valuation models used by Goldman Sachs and Salomon Brothers analysts incorporating reduced demand and sales assumptions show that the market value of TyCom's stock at the time of the offering under these reduced demand and sales assumptions was between \$13.79 and \$16.57 per share which supports the conclusion from the event study that TyCom's stock was artificially inflated by at least \$12.61 per share on the date of the offering.*

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L. Mr. Fischel disagrees with the conclusion that the DCF analysis supports my opinion (at ¶40)

29) Mr. Fischel states at paragraph 40 that "Professor Hallman's conclusion is flawed because the results of his DCF analysis are driven by his alternative assumptions. In any DCF model, all else equal, lower cash flow assumptions will always result in lower values but do not establish that the original assumptions were incorrect." Mr. Fischel emphasizes this point at fn. 22, stating "In addition, if Mr. Bise's assumptions are wrong, as I understand Tyco and TyCom claim, then Professor Hallman's conclusions from his DCF analysis are wrong."

30) Mr. Fischel and I may agree on the crux of the valuation analysis I performed using the Goldman and Salomon DCF models. I agree with Mr. Fischel that my DCF analysis is not a determination of whether or not the original assumptions were incorrect, a question of liability before the court. My DCF analysis does, however, provide a reasonable estimate of the value of TyCom stock at the issue date if Plaintiff is correct and succeeds in proving his claims before the court. In that case, to paraphrase Mr. Fischel, if Mr. Bise's assumptions are correct, as I understand Plaintiff's claim, then the conclusions from my DCF analysis are also correct.

Hallman Original Opinion 4: The significant decline in TyCom's stock price resulting from the market's realization that TyCom's representations of future undersea bandwidth demand were overstated caused the purchasers of TyCom stock to suffer losses of \$12.61 per share. This estimate provides a sound basis for computing the damages suffered by members of the class in this action, if the IPO would have been possible had there been no overstatement of bandwidth demand by the defendants.

M. Mr. Fischel claims that I have ignored "substantial offsetting benefits" of the carve out to plaintiffs who own Tyco stock (at ¶¶41-42)

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- 31) I have reviewed Mr. Fischel's analysis, and disagree with his finding of "substantial offsetting benefits" to plaintiffs in this matter who also owned Tyco stock during the relevant period. His analysis requires speculative and inappropriate assumptions and does not provide a sound basis for calculating damages in this matter.
- 32) Under Mr. Fischel's analysis, the "offsetting benefit" by which aggregate damages should be reduced is the "loss avoided" on Tyco shares by owners of both Tyco and TyCom stock. Mr. Fischel states "Had Tyco not carved out TyCom, it would have retained ownership of 100 percent of TyCom so that any decline in TyCom's market value would be incurred by Tyco and its shareholders." He then (in his exhibit W) calculates the "loss avoided" on Tyco holdings as the change in TyCom market capitalization over July 26, 2000 – March 22, 2001 allocated by ownership of Tyco stock. In short, this "offsetting benefit" analysis requires that the court assume Tyco shareholders would have been worse off but-for the actions leading to the plaintiff's claims in this matter.
- 33) Mr. Fischel ignores the fundamental allegation in this case, namely that TyCom's shares were over-valued ("inflated") because of the information in the TyCom registration statement and prospectus that were promulgated through the IPO process, and the majority, if not all, of the decline in the TyCom stock was due to the realization by the market of this over-valuation. If TyCom management had not inflated the initial value of TyCom with misrepresentations of the true state of broadband demand and supply, then the decline in value of TyCom's stock would have surely been less than the actual decline used by Mr. Fischel in his offset calculations.
- 34) By using the actual decline in the TyCom stock to calculate an "offsetting benefit" to Tyco shareholders, Mr. Fischel is assuming that the plaintiff's claims of inflation are false and that all of the actual decline in TyCom stock would have occurred even without the alleged misrepresentations made by TyCom management regarding the state of broadband demand. If the court agrees with the plaintiff's claims and awards damages, it is clearly incorrect to assume that the plaintiff's claims are false in calculating an offset to those damages.

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- 35) Additionally, Mr. Fischel's "offsetting benefits" analysis requires the assumption that Tyco would have gone forward with the TGN without the carve-out and IPO, and that the TGN value would have declined the same amount over the class period regardless of the amount of initial inflation in the market's value of the TGN. As the first assumption is speculative, and the second false under plaintiffs' claims, Mr. Fischel's assertion of "substantial offsetting benefits" if plaintiff's claims are sustained is unreliable and inappropriate.
- 36) If Tyco had not funded the TGN project with the IPO offering, it is not clear that they would have proceeded with the project. An early presentation of the TGN project assumes the deal will be structured as an IPO, but considers a debt-financed alternative. A slide warns "there is a real probability of a one-notch [credit] downgrade even though Tyco will maintain its investment grade status" and "Although in the long term debt may provide the greatest upside potential for Tyco shareholders, the risks coupled with the lost financial flexibility and diminished near-term market awareness of the new Telecom story may outweigh its limited benefit."²⁰ If Tyco would not have built the TGN but-for the opportunity to push a portion of the risk and cost of the build out onto the purchasers of TyCom stock in the IPO, then there would not have been a loss on the TGN, and therefore the Tyco shareholders would not have been worse off but-for the actions leading to the plaintiff's claims.
- 37) It is also notable that by identifying benefits "that occurred as a result of the TyCom IPO" as offsets to damages awarded due to the misrepresentations and omissions alleged by plaintiffs, Mr. Fischel is asserting that the TyCom IPO and the misrepresentations and omissions are one and the same. It is my understanding that plaintiff's claim that they were damaged by, among other things, TyCom's misrepresentations of demand that accompanied the IPO, not the fact of the IPO itself. As stated in my 12/21/07 report, under the scenario in which TyCom could not have

²⁰ ATYC-10082360-2

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completed the IPO without the alleged misstatements, rescission (i.e., out of pocket loss) provides the appropriate calculation of damages.²¹

Liability and Scienter: Mr. Fischel presents several arguments primarily speaking to liability and scienter which are unrelated to the opinions presented in my 12/21/07 report, but which are flawed.

N. Mr. Fischel states "Market participants were aware that investing in the stock of companies in the telecommunications industry was risky" and implies investors accepted risk by buying TyCom shares. (at ¶12-22)

38) Stock prices and returns reflect many risks, but I do not know of any finance theory that posits that stocks are priced to reflect the risk that the managers of the firm might intentionally mislead the market regarding projected demand for the firm's product. In purchasing shares of TyCom stock, investors did not accept the risk of manager's misrepresenting the truth. The effects of the risks that Mr. Fischel describes – namely the overall economic risk faced by virtually all firms, and the risk of operating in the telecom industry – are controlled for in my two-factor statistical model and as such are not included in my estimate of damages in this matter.

O. Mr. Fischel implies that insiders would not have held shares if they had not believed in TyCom's claims (at ¶30-31)

39) Mr. Fischel ignores the signaling implications of stock ownership by insiders. Management had significant human capital invested in the firm already, which they would have severely damaged if they had signaled their own misgivings to the market by either refusing to hold firm stock or by selling the firm stock they had. Management had little choice but to hold their stock if they wanted

²¹ 12/21/07 Expert Report of Dr. Greg Hallman, TN RE: TyCom Securities Litigation, at ¶19.

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the market to believe that the firm was likely to succeed, and were rewarded for the IPO process via bonuses.²²

- 40) Mr. Fischel also ignores the compensation provided to insiders that was not in the form of TyCom stock. The document marked as Kassay deposition exhibit 22 outlines \$13 million in distributed cash compensation for the IPO.²³ The document marked as Calandra deposition exhibit 30 outlines \$8.85 million in cash bonuses for lighting and recognizing capacity sales on the trans-atlantic portion of the TGN by the end of Q3 2000. The document marked as Gutin deposition exhibit 64 documents an additional 82 million of bonuses "for successfully completing the TyCom IPO" to senior executives in the form of forgiven relocation loans. Mr. Kozlowski himself received \$33 million in the loan forgiveness program.²⁴

P. Mr. Fischel assumes Tyco could have sold more of TyCom (at \$32)

- 41) Mr. Fischel claims that "If Tyco was aware of the alleged inflation in TyCom's stock price, it would have had an incentive to sell a much larger stake at the allegedly inflated IPO price." In fact, Tyco did have an incentive to sell a large stake, and the record indicates that Tyco sold as much of TyCom as they could have under the existing market conditions. Mark Williamson of Goldman Sachs testified that that Tyco "wanted something larger" than the \$1 - 1.5 billion offering size proposed by Goldman in June of 2000.²⁵ The final IPO was a reduction from the \$4 billion proposed in March of 2000.²⁶ Mark Williamson testified the reduction of the price over time reflected the fact that "The market for telecommunications companies had weakened" after the March analysis.²⁷ Goldman

²² TyCom Securities Litigation Consolidated Securities Class Action Complaint, 12/10/2004, paragraph 136-140

²³ While the Kassay 22 document does not explicitly state that the form of the listed IPO bonuses, the document marked as Runge exhibit 21 clarifies the listed Calandra, Runge, and VanRossem bonuses were distributed in cash and bonuses in other forms were tabulated separately.

²⁴ Tyco separately identified 79.2 Million in "unauthorized" Tycom bonuses through the loan forgiveness program. Tyco International(US) Inc., v. L. Dennis Kozlowski, Complaint, 9/12/02, p 4.

²⁵ 4/26/07 Deposition of Mark Williamson, page 166; See also Williamson Exhibit 11.

²⁶ Kalogerou Exhibit 31

²⁷ 4/26/07 Deposition of Mark Williamson, page 126.

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Sachs explicitly recommended against Tyco selling more shares than the amount represented to be necessary to fund the TGN.²⁸ As it was, TyCom was the 10th largest IPO of the 2000, and the 3rd largest IPO of the second half of 2000.²⁹

Q. Mr. Fischel implies that TyCom would not have bought back stock if they had been aware of the alleged inflation in TyCom's stock price (at \$33)

42) Notably, TyCom did not begin their stock buyback until March 3, 2001, at which point I calculate that a large part of the initial stock price inflation had already been discovered by the market.³⁰ Despite announcing and nominally beginning the buyback at the start of the month of March 2001, the majority of the buyback occurred after March 22, 2001, when TyCom stock had already declined to \$10.48 per share. By March 22, 2001, only 2.4 million shares had been repurchased for \$40 million dollars, less than 10% of the announced buyback.³¹ Contrary to Mr. Fischel's assertion that Tyco's buyback of TyCom stock is inconsistent with the notion that Tyco was aware of inflation in TyCom's stock price, the tepid implementation and timing of the actual share repurchases was, in my view, consistent with Tyco having knowledge of the alleged inflation in TyCom's stock. See Chart 2 below.

²⁸ 4/26/07 Deposition of Mark Williamson, page 160-1; See also Calandra Exhibit 6.

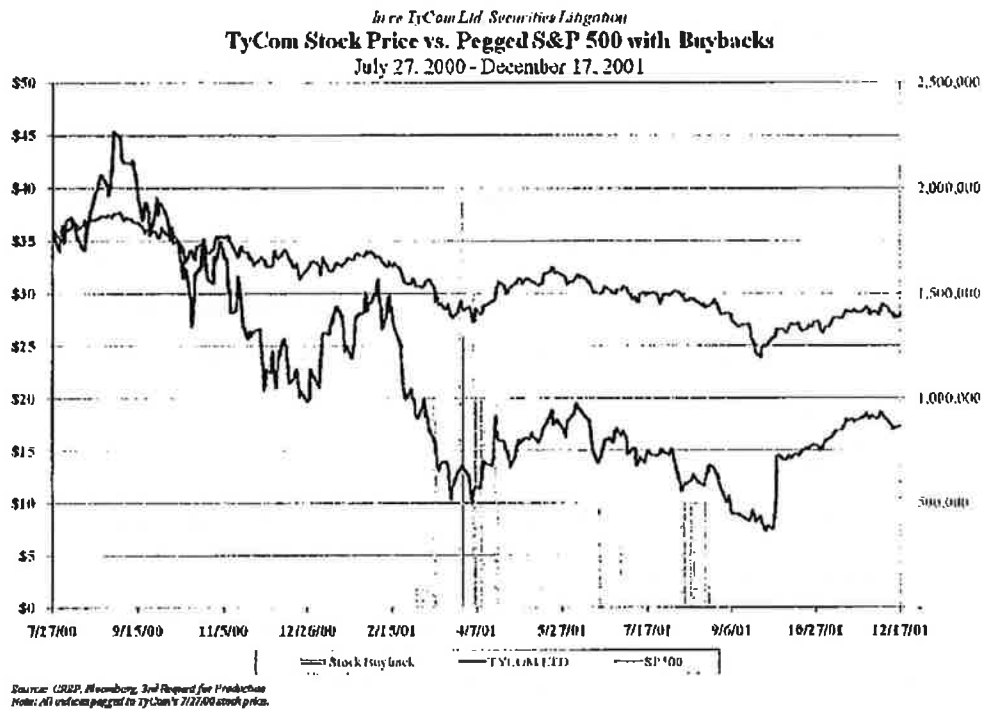
²⁹ Internet Source: <http://web.archive.org/web/20010128223600/http://www.ipohome.com/biggest.asp>. Accessed 3/27/08.

³⁰ 12/21/07 Expert Report of Dr. Greg Hallman, IN RE: TyCom Securities Litigation

³¹ Defendants Tyco International LTD. and TyCom LTD's Objections and Responses to TyCom Plaintiffs' Third Set of Requests for Production of Documents. 10/17/07.

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Chart 2



43) Additionally, the record shows that there were market participants who saw the buyback

announcement as a form of Tyco covering a short position on TyCom stock (i.e., selling TyCom stock to the public at the IPO price and then profiting from the sale by buying the stock back at a significant discount to the IPO price.)

- a) March 5, 2001 – A transcript from CNBC's Squawk Box contains the following description of TyCom's buyback in a discussion of both the TyCom buyback and a buyback by a company called Inrange:

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Jim, I don't know if you noticed this, Tyco not that long ago brought TyCom public in order to get the public valuation. It felt that it was undervalued when it was a part of the company. That is their telecom company. On Friday, they announced, lo and behold...

Mr. CRAMER: Buyback.

FABER: ...

Mr. CRAMER: Yeah. It just says that these guys took advantage of a very hot market. Tyco Ty TyCom, perfect timing for the fiber stocks. Inrange, perfect timing for the storage stocks. Kind of picked off the stock market in general. Now they're taking advantage of it and buying it back. It was like a great short that they put out and now they're covering the short.

FABER: Yeah.

Mr. CRAMER: Not such a bad idea if you're those companies. Not such a good thing to be long on those companies.

- b) October 5, 2001 -- An article in TheStreet.com contained the following description of Tyco's ultimate buyback of all of TyCom's stock: "In the case of TyCom, Tyco now proposes to buy back for \$14 or, more precisely, .2997 shares of Tyco -- the same shares it sold to the public for \$32 in a July 2000 IPO underwritten by Goldman Sachs. From the perspective of Tyco on a consolidated basis, they will be closing out a short sale of 61 million shares for a \$1.1 billion profit. Whatever reasons Tyco had for creating a separate trading subsidiary 15 months ago apparently are no longer valid. What was supposed to be a richly valued, high-multiple acquisition currency has imploded into an embarrassment that might otherwise be hidden in the vast conglomerate."

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- c) October 20, 2001 An article in the Asbury Park Press on Tyco's ultimate buyback purchase of the minority position in TyCom stock contained the following: " 'The low price is one reason Tyco decided to pick up the minority stake,' said Keller, the analyst. 'They are cleaning up the mess,' Keller said."

IV. Documents, Data and Other Information Considered

A complete list of all the documents I considered is contained in Tab 3 of my original report dated December 21, 2007. Tab 3 of this report contains a list of additional documents considered since that date.

V. Potential Additional Analyses to Perform

My opinions are based on the information received and available as of the date of my report. I will consider any additional documents or information that becomes available after the date of this report. I will also consider issues raised at my deposition. Any of this additional information may cause me to change my opinions, and I may supplement this report accordingly.

VI. Compensation

I am being compensated at a rate of \$400 per hour. Staff working at my direction billed at rates between \$115 and \$300 per hour.

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Respectfully Submitted,

A handwritten signature in black ink, appearing to read "G. Hallman", written over a horizontal line.

Greg Hallman

TAB 2

GREG HALLMAN

Ph.D. Finance,
University of Texas at Austin

M.B.A. Finance,
Tulane University

B.A. Chemistry,
University of Virginia

Dr. Greg Hallman is a member of the faculty in the finance department of the University of Texas' McCombs School of Business where he teaches graduate-level courses in investments, real estate finance (mortgage-backed securities), corporate finance, and valuation. In addition to his work at the University of Texas, Dr. Hallman has testified extensively on matters involving securities, valuation, intellectual property, and commercial damage issues. He holds a Ph.D. in finance from the University of Texas at Austin, an M.B.A. from Tulane University and a B.A. in chemistry from the University of Virginia.

PROFESSIONAL EXPERIENCE

2002–Present *Lecturer in Corporate Finance, Investments, and Real Estate Finance*,
University of Texas at Austin, McCombs Graduate School of Business,
Department of Finance

- Awarded "Best Professor" by Alpha Kappa Psi business fraternity
- Named to MBA Faculty Honor Roll: 2002–2007

2006, 2007 *Visiting Professor of Finance*, Instituto de Empresa, Madrid, Spain

1999–2002 *Managing Director* (2001–2002), *Director* (1999–2001); InteCap, Inc.

1997, 1998 *Finance Instructor*, University of California, Berkeley-Extension

1996–1999 *Consultant*, PHB Hagler Bailly, Inc.

1993–1995 *Finance Instructor*, University of Texas at Austin

1988–1990 *Senior Financial Analyst*, HPI Healthcare, Inc.

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PUBLICATIONS AND RESEARCH PAPERS

"Business Valuation: Adjusted Present Value (APV) Method." *Litigation Services Handbook: The Role of the Financial Expert*, Roman L. Well, Peter B. Frank, Christian W. Hughes, Michael J. Wagner, eds., Fourth Edition, John Wiley and Sons, 2007 (co-authored with Bonnie J. Goldsmith).

"Carrots and Sticks: The Threat of Dismissal and Incentive Compensation." Hallman, Greg, Hartzell, Jay C. and Parsons, Chris, (June 2005), McCombs Research Paper Series, available at SSRN: <http://ssrn.com/abstract=558749>

"Real Options Applications for Telecommunications Deregulation." With Chris McClain. *Real Options: The New Investment Theory and Its Implications for Telecommunications Economics*, James Alleman and Eli Noam, eds., Boston: Kluwer Academic Press, 1999.

"Tax Effects of Discount Rates in Taxable Damage Awards." With Michael J. Wagner. *CPA Expert*, winter 1999.

PRESENTATIONS AND PROFESSIONAL MEETINGS

Discussant for "Forecasting Real Estate Cash Flows: Evidence on the Quality of FFO Forecasts," 2004 Financial Management Association Annual Meeting, New Orleans, Louisiana.

"Statistical Regression in Litigation," 2000 AICPA National Advanced Litigation Services Conference, October 17, 2000, Beverly Hills, California.

"Advanced Issues in Determining Discount and Growth Rates," 1997 AICPA National Advanced Litigation Services Conference, October 16, 1997, Las Vegas, Nevada (co-presented with Michael J. Wagner).

TESTIMONY AND EXPERT REPORTS

County of Solano v. Lionsgate Corporation State of California, State of California, Office of Administrative Hearings; arbitration and deposition testimony: a statistical analysis of construction cost overruns on County bridge projects. (1998)

Stoimle v. Stoimle, Superior Court of the State of California, County of San Francisco; trial and deposition testimony: an analysis of executive compensation and community and separate character of executive stock options. (1999)

Kevin L. Guertin v. Home Depot, United States District Court, Northern District of California, San Jose Division; federal Rule 26 report: an analysis and valuation of employee stock options. (2000)

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Bamford v. Bamford, Superior Court of the State of California, County of San Mateo; deposition testimony: an analysis of executive compensation and community and separate character of executive stock options, and analysis of community and separate investment risk profiles. (2000)

Brent H. Bocbe and Marsha A. Beebe v. Charles Kelson et al, United States District Court, Eastern District of California; deposition testimony and declaration: a statistical analysis for the California Department of Justice regarding alleged price-fixing in State contracts. (2000)

ARCH Development Partners; fairness opinion: valuation of preferred stock in six early stage (pre-public) technology ventures. (2000)

Provision Dental Systems, Inc. v. Robert Shiller, American Arbitration Association, Case no. 74 116 01083 00 LDG; arbitration testimony: valuation of private equity and calculation of lost earnings. (2001)

BankAmerica Corp. Securities Litigation, United States District Court, Eastern District of Missouri; federal rule 26 report and deposition testimony: a calculation of damages suffered by class in class action securities litigation related to merger of BankAmerica and Nationsbank. (2001)

Oracle Corporation v. Pier Carlo Falotti, United States District Court, Northern District of California, San Francisco Division; Federal Rule 26 report and deposition testimony: a calculation of damages suffered by Mr. Falotti from lost Oracle stock options due to alleged improper termination. (2001)

George J. Zeller v. America Online, United States District Court, Eastern District of Virginia, Alexandria Division; Federal Rule 26 report: a rebuttal report filed regarding calculation of damages suffered by Mr. Zeller. (2001)

Ronald J. Arnold v. America Online, Superior Court of the State of California, County of Santa Clara; Deposition testimony: a rebuttal to plaintiff's expert regarding calculation of damages suffered by Mr. Arnold and valuation of employee stock options and lost wages. (2002)

Rebecca Aaronson v. Xerox, United States District Court, Northern District of California, San Francisco Division; Federal Rule 26 report: a calculation of damages suffered by Ms. Aaronson from wrongful termination; rebuttal to plaintiff's expert. (2002)

Lawrence Spiler v. Xerox, United States District Court, Northern District of California, San Francisco Division; Federal Rule 26 report: a calculation of damages suffered by Mr. Spiler from wrongful termination; rebuttal to plaintiff's expert. (2002)

VFB L.L.C. v. Campbell Soup Company, United States District Court, Northern District of Delaware; trial, deposition, and Federal Rule 26 report: a business valuation and calculation of damages suffered by creditors from bankruptcy of Vlasic Foods International (a spin-off from Campbell's Soup Company). (2004)

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Latin American Courier Inc. and Pegaso Express S.A. v. Airborne, Inc. and DHL Holdings (USA) et. al., in the District Court, 285th Judicial District, Bexar County, Texas; trial, deposition, and Federal Rule 26 report: a calculation of lost profits related to express package shipping into and out of Mexico; calculation of various elements of commercial damages. (2005)

Matter between *Applied Mechanical Corporation and Daniel J. Tobin*; Mediation; Testimony at mediation: a business valuation; valuation of private equity holdings. (2005)

Carriage Way Limited Partnership v. The National Life Insurance Co., United States District Court, Eastern District of Michigan, Southern Division; Federal Rule 26 report, affidavit, deposition: a commercial mortgage prepayment calculation and interpretation. (2005)

Elaine Trahan, Individually and on behalf of all others similarly situated vs. Long Beach Mortgage Company and Washington Mutual Bank, F.A.; United States District Court for the Eastern District of Texas, Lufkin Division; Affidavit: home equity loan mortgage design (2006)

Stephon Johnson et. al., vs. Baran Group, et. al., in the Superior Court, State of Georgia, Civil Case no. 2004CF89313; Federal Rule 26 report, depositions: calculation of damages suffered by shareholders related to sale of o2 Wireless, a publicly traded telecommunications equipment company. (2006)

Matter between *Endocare Inc. vs. KPMG*; Mediation; Testimony at mediation re: direct costs and costs of financial distress suffered by Endocare due to alleged accounting and auditing insufficiencies on the part of KPMG. (2006)

Watchguard Technologies, Inc. v. Michael N. Valentine and SonicWall, Inc., United States District Court for the Northeastern Division of Texas, Dallas Division; Federal Rule 26 report and deposition: calculation of damages related to theft of trade secret claim. (2006)

Stonehill-PRM WC I, L.P., v. Chasco Constructors Ltd., L.L.P. and Safeco Insurance Company of America, United States District Court, Travis County, Texas; report and deposition; valuation of a student apartment complex in Austin, TX related to a breach of contract claim regarding construction. (2007)

In Re: Chaparral Resources Inc. Shareholders Litigation, In the Court of Chancery of the State of Delaware in and for New Castle County; C.A. No. 2001-N; report, deposition, and trial; analysis of oil company (Chaparral) stock price in relation to a merger bid from Lukoil (2007)

Alvarez & Marsal North America, LLC, Liquidating Trustee of Azabu Buildings, Ltd., v. Beecher, Ltd., In the United States Bankruptcy Court, District of Hawaii, Case No. 05-50011, report and deposition; valuation of hotel real estate assets and hotel business value. (2007)

In Re: Tyco International, Ltd. Multidistrict Litigation, RoseMarie Stumpf v. Neil R. Garvey, et. al., (In Re: TyCom Securities Litigation), MDL Docket No. 02-1335-B; United States District Court for the District of New Hampshire; report; calculation of damages suffered by TyCom shareholders (2007).

TAB 3

In re TyCom Ltd. Securities Litigation
Additional Document index

Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
		September 1980	Academic Paper	Brown, S.J., and J.B. Warner, "Measuring security price performance," Journal of Financial Economics 8, September 1980, pp. 205-258.
		December 1999	Report	"Bandwidth Bonanza" Yankee Group Europe
ATYC-10082317	ATYC-10082395	1/6/2000	Exhibit	William Exhibit 4
ATYC-10082244	ATYC-10082269	1/10/2000	Exhibit	Ashcroft Exhibit 20
GS-TYCOM01578	GS-TYCOM01590	3/7/2000	Exhibit	William Exhibit 8
GS-TYCOM13616	GS-TYCOM13622	April 2000		Telegraphy International Bandwidth 2000 Report
		6/23/2000	Exhibit	William Exhibit 11
		7/27/2000	Article	"Price of Tyco Unit Surges at Offering" the New York Times
		7/27/2000	Article	"TyCom Rises on Debut" TheStreet.com
		8/7/2000	Article	"An Optical Delusion" Karl Tao/Greenfield Time Magazine
ATYC-07204661		9/11/2000	Exhibit	Gutin Deposition Exhibit 64
		9/18/2000	Article	"Bringing it Home" Brian Quinton Telephony
		9/24/2000	Article	"On or Off The Bandwidth Bandwagon" Peter Behr Washington Post
		10/9/2000	Article	"Operators of Fiber-Optic Networks Face Capacity Glut, Falling Prices" Mark Heinzl Wall Street Journal
		10/16/2000	Article	"Glitzy Gamble" Forbes
		November 2000	Article	"Boom or Bust" Valerie Thompson NewCarrier
		11/8/2000	Article	"High Fliers blame 'panic' for tech falls: Investors fear glut in telecoms capacity." Richard Waters Financial Times
		11/8/2000	Article	"High fliers blame 'panic' for tech falls: Investors fear glut in telecoms capacity," Financial Times
		11/13/2000	Article	"Still Afloat in an Ocean of Doubt," Fortune
		11/21/2000	Article	"Dishnet DSL to Lay Undersea Cable from India to Guam (Update1) Bloomberg
		11/22/2000	Article	"Lucent Slashes Its Sales, Earnings; Firm Cites Error; Stock Tumbles" Peter Goodman, Washington Post
		December 2000	Article	"The terabit age comes to Asia" America's Network Telecom Investor Supplement
		12/1/2000	Article	"Tycom Completes Global Crossing's PAC Cable System" Business News Americas-English

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Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
		12/1/2000	Article	"Optical Optimism; Technology Information" David Passmore, Business Communications Review
		12/12/2000	Article	CNBC News Transcript.
		12/22/2000	Article	"Lucent Lowers Expectations for 3rd Time" Simon Romero New York Times
		12/29/2000	Article	"Broadband Firms Face New Challenge -- To Survive, Industry Must Find Enough Customers to Use New Networks." Mark Heinzl Wall Street Journal
		1/1/2001	Article	"Optical networking is the link to global SANs." Kanwar J.S. Chadha Lightwave
		1/8/2001	Article	"In The Hall of Hedge Fund Superheroes" Andy Serwer. Fortune.
ATYC-TC-00010034	ATYC-TC-00010035	1/19/2001	Article	"Boom or bust for submarine cable industry," Exchange.
		1/19/2001	Article	"ADC Updates Guidance on Financial Results" ADC Press Release.
		1/28/2001	webpage	"The Biggest IPOs of the Year" Internet Source: http://web.archive.org/web/20010128223600/http://www.ipohome.com/biggest.asp . Accessed 3/27/08.
		1/31/2001	Article	"Bandwidth Glut Looming for Telecom Industry" Business Wire
		2/1/2001	Article	"The Coming Bandwidth Bubble Burst" Grahame Lynch. America's Network.
		2/7/2001	Article	"Networthy" Communications Today.
		2/21/2001	Article	"ADC Reports First Quarter 2001 Results" Business Wire
		2/21/2001	Article	"Thursday's Winners & Losers: ADC Telecom, Emulex, Portal Software, Myriad Genetics" TheStreet.com
		2/28/2001	Article	"Fiber-Optic Firms Face Issue of Overbuilding" Dina ElBodhdady Washington Post
		3/1/2001	Article	"Fiber bandwidth glut: Is that the problem?" Rob Newman. Lightwave.
		3/5/2001	Transcript	Transcript of CNBC's Squawk Box
		3/19/2001	Article	"Laying It On -- C&W stares down transatlantic capacity glut with Apollo cable deal," tele.com
		4/1/2001	Article	"Darwinism Rules; Industry Trend or Event" David Passmore. Business Communications Review
		April 2001	Report	"International Bandwidth 2001," TeleGeography

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Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
ATYC-01085392		4/24/2001	Article	"A Bandwidth Glut Exists in the Long Haul Market, but a Shortage Exists in the Metro and Access Markets" PR Newswire
		5/1/2001	Article	"The Bandwidth Glut Opportunity; Industry Trend or Event." Matthew Howard. Business Communications Review.
		5/7/2001	Article	"Carriers Must Show Customers The Way to Broadband" Robert Preston. InternetWeek.
		5/23/2001	Exhibit	Swartz Exhibit 28
		5/27/2001	Article	"Bandwidth firms can't will demand into reality." Jennifer Beauprez, Kris Hudson. The Denver Post.
		5/28/2001	Article	"The Most Aggressive CEO" Business Week
		7/9/2001	Article	"Fitch Changes Corning's Rating Outlook to Negative" Business Wire
		8/28/2001	Article	"Hot Lines Beneath the Deep Blue Sea" Business News New Jersey, Joao-Pierre S Ruth
		9/10/2001	Article	"Drowning in the Pacific cable glut; international telecom" Communications Week International
		10/5/2001	Article	"Taking Advantage of a New Merger Trend" thestreet.com. David Brail.
		10/20/2001	Article	"TyCom cuts 100 workers at Eatontown laboratory" David Willis Ashbury Park Press
		12/1/2001	Article	"A road to nowhere? Bandwidth strategy" Communications International
		9/12/2002	Complaint	Complaint. Tyco International Ltd et. al. v. L. Dennis Kozlowski.
		1/28/2003	Complaint	"Consolidated Securitas Class Action Complaint." In Re Tyco Securities Litigation.
		4/26/2006	Transcript	Deposition of Mark V.R. Williamson.
		9/25/2007	Transcript and Exhibits	Deposition of Jack Grubman and Exhibits
		10/17/2007	Correspondence	Defendants Tyco International LTD, and TyCom LTD's Objections and Responses to TyCom Plaintiffs' Third Set of Requests for Production of Documents.
		2/25/2008	Report	"Report of Daniel R. Fischel" Daniel R. Fischel. In re TyCom Securities Litigation.
		2/25/2008	Report	"Report of Carlyn R. Taylor" Carlyn R. Taylor. In re TyCom Securities Litigation.
		12/31/99-12/31/01	Financial Data	S&P Component Sector Indices. Bloomberg.
		1999-2002	Financial Data	Brocade stock price. NASDAQ.com

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Beginning Bates	Ending Bates	Document Date	Document Type	Document Title
		4/1/6/01	Article	"Providers are bailing like crazy in the face of a flood of excess submarine cable capacity -- cables for deep six." Brian Washburn Tele.com
		9/2000-9/2001	Data	Thomson Financial Momentum Report: Tyco
		9/2000-9/2001	Data	Thomson Financial Momentum Report: TyCom
		Fall 2003	Report	"Boom and Bust in Telecommunications" Elise A. Couper, John P. Hejkal, and Alexander L. Wolman. Federal Reserve Bank of Richmond Economic Quarterly Volume 89/4
NYAG-GRUB000001	NYAG-GRUB000732	Various	AOD and Exhibits	Jack Benjamin Grubman Assurance of Discontinuance
NYAG-CIT1000001	NYAG-CIT1000984	Various	AOD and Exhibits	Citigroup Global Markets, Inc. Assurance of Discontinuance
			Webpage	"Research Analyst Conflicts of Interest Investigation" Utah Division of Securities, Internet Source: http://www.securities.utah.gov/enforce_analysts_settlement.html
ATYC-27652848			Exhibit	Runge Deposition Exhibit 21 - "Certification of Fiscal Year 2002 Bonus Payments and Stock Bonus"

Articles and sources specifically mentioned in the Text or Footnotes of the report are incorporated here by reference.